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“Servant Leadership and Mental Health Among
Leaders and Followers: Empirical Investigations on
Antecedents, Processes and Outcomes”

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QUOTE

“The Servant-Leader is servant first. [...] It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead” (Greenleaf, 1977, p. 7).

Abstract: The incidence of sick leave caused by mental illness has been on the rise for years. This ongoing “epidemic” poses a major challenge to the economy. In occupational health psychology, leadership is having an important role in maintaining and promoting mental health. A very promising leadership theory that goes beyond other prevalent leadership theories to increase positive outcomes on different levels (individual, team, organization) is servant leadership. Surprisingly, in-depth empirical evidence on the relationship between servant leadership and mental health at work is currently scarce. Therefore, I examined the impact of servant leadership on mental health at both employee and leader levels. Following the health definition of World Health Organisation, I conceptualized mental health as a two continua model and measured using two indicators, emotional exhaustion and flourishing. In doing so, I used emotional exhaustion as a subclinical indicator of mental illness and flourishing as an indicator of psychological well-being. In addition, I examined compassionate love and religious quest orientation as potential antecedents of servant leadership. Thus, this thesis not only extends the nomological network of servant leadership in terms of antecedents, but also provides insights into the relationship between servant leadership and mental health on two levels, besides psychological processes and boundary conditions of this relationship. Such a more nuanced understanding of servant leadership in the context of occupational health psychology allows us to provide key practical implications for personnel selection and development, and for organizational development and occupational health management. Using a sample of leader-follower dyads ($n = 170$) in a cross-sectional design, with the first study I investigated whether compassionate love, as antithesis to narcissism, and religious quest orientation are significant predictors of servant leadership. The sample comprised extra occupational students from a large German University of Applied Sciences. Regression analyzes revealed that compassionate love turned out to be the most meaningful antecedent of servant leadership in this study, by explaining variance beyond narcissism in the criterion variable. Religious quest orientation had no substantial influence on servant leadership. In a second study, I examined the same sample for the effects of servant leadership on leader mental health using structural equation modeling. Based on the Theory of Purposeful Work Behavior, I derived experienced meaningfulness as a mediator between servant leadership and the indicators of mental health. The results showed that

servant leadership improved leaders' mental health. This relationship was mediated through the psychological mechanism of experienced meaningfulness. Servant leadership promoted experienced meaningfulness at work, which decreased emotional exhaustion and increased flourishing. In the third study, I analyzed the relationship between servant leadership and employees' mental health in a shortitudinal design with three measurement points using a sample of extra occupational students from a German University of Applied Sciences ($n = 106$). Based on the Self-Determination Theory, I derived satisfaction of basic psychological needs as a mediator between servant leadership and mental health outcomes. The results of the regression analyses showed that servant leadership improved employees' mental health. Whereas this relationship was mediated by basic need satisfaction for both emotional exhaustion and flourishing, in terms of indirect-only mediation. Servant leadership nourished employees' basic psychological needs, causing them to feel less emotionally exhausted while showing increased flourishing. The fourth study complemented the third study by adding employee-related boundary conditions. Specifically, in study 4, using a cross-sectional sample of occupational students from a German University of Applied Sciences ($n = 504$), the same mediation model from the third study was extended to include employees' implicit leadership theories. Regression analyses were used to calculate moderated mediation models. Results showed that servant leadership satisfies employees' basic psychological needs more strongly when employees' implicit leadership theories are congruent with the servant leadership ideal type, specifically low tyranny and high sensitivity. Hence, if the employee has a prototypical idea of a tyrannical leader, this weakens the positive outcome of servant leadership on mental health. If the employee in turn has a prototypical idea of an empathetic leader (sensitivity), this strengthens the connection between servant leadership and mental health via basic need satisfaction. In summary, this thesis could contribute the following findings: First, further antecedents of servant leadership could be empirically evaluated. Second, it could be shown that servant leadership is positively related to mental health-related variables at both employee and leader level. Third, the psychological mechanisms at leader-level (experienced meaningfulness) and employee-level (satisfaction of basic psychological needs), as well as specific employee-related boundary conditions (implicit leadership theories), which can strengthen or weaken the studied relationships, could be identified.

Theoretical contributions, practical implications and future research directions and conclude each of the studies, and in an overall discussion the whole thesis.

Keywords: servant leadership; emotional exhaustion; flourishing; mental health; leadership psychology; occupational health psychology

Resumen: La incidencia de las bajas por enfermedad causadas por enfermedades mentales ha ido en aumento durante años. Esta "epidemia" en curso plantea un gran desafío a la economía. En la psicología de la salud ocupacional, el liderazgo desempeña un papel importante en el mantenimiento y la promoción de la salud mental. Una teoría de liderazgo muy prometedora que va más allá de otras teorías de liderazgo prevalentes para aumentar los resultados positivos en diferentes niveles (individuo, equipo, organización) es el liderazgo de servicio. Sorprendentemente, actualmente son escasas las pruebas empíricas en profundidad sobre la relación entre el liderazgo de servicio y la salud mental en el trabajo. Por lo tanto, se examinó el impacto del liderazgo de servicio en la salud mental tanto a nivel de empleados como de líderes.

Siguiendo la definición de salud de la Organización Mundial de la Salud, se conceptualizó la salud mental como un modelo continuo y lo medí usando dos indicadores, agotamiento emocional y crecimiento personal. Al hacerlo, se utilizó el agotamiento emocional como indicador subclínico de enfermedad mental y el crecimiento como indicador de bienestar psicológico. Además, se examinó el amor compasivo y la orientación religiosa como antecedentes potenciales del liderazgo de servicio. Por lo tanto, esta tesis no solo extiende la red nomológica de liderazgo de servicio en términos de antecedentes, sino que también proporciona información sobre la relación entre el liderazgo de servicio y la salud mental en dos niveles, además de los procesos psicológicos y las condiciones límite de esta relación. Esta comprensión más matizada del liderazgo de servicio en el contexto de la psicología de la salud ocupacional nos permite proporcionar implicaciones prácticas clave para la selección y el desarrollo del personal, y para el desarrollo organizacional y la gestión de la salud ocupacional. Usando una muestra de la diada líder-seguidor ($n = 170$) en un diseño transversal, con el primer estudio se examinó si el amor compasivo, como antítesis al narcisismo, y la orientación religiosa son predictores significativos del liderazgo de servicio. La muestra estaba formada por estudiantes extra ocupacionales de una gran Universidad Alemana de Ciencias Aplicadas. Los análisis de regresión revelaron que el amor compasivo resultó ser el antecedente más significativo del liderazgo de servicio en este estudio, al explicar la varianza más allá del narcisismo en la variable de criterio. La orientación religiosa no tuvo una influencia sustancial en el liderazgo de servicio. En un segundo estudio, se examinó la misma muestra para los efectos del

liderazgo de servicio en la salud mental del líder usando el modelado de ecuaciones estructurales. Basándonos en la Teoría del Comportamiento de Trabajo Propositivo, derivamos experiencia significativa como mediador entre el liderazgo de servicio y los indicadores de salud mental. Los resultados mostraron que el liderazgo de servicio mejoró la salud mental de los líderes. Esta relación fue mediada a través del mecanismo psicológico de la significación experimentada. El liderazgo de servicio promovió el sentido de la experiencia en el trabajo, que disminuyó el agotamiento emocional y aumentó el crecimiento personal. En el tercer estudio, se analizó la relación entre el liderazgo de servicio y la salud mental de los empleados en un diseño a corto plazo con tres puntos de medición utilizando una muestra de estudiantes extra ocupacionales de una Universidad Alemana de Ciencias Aplicadas ($n = 106$). Basándonos en la Teoría de la Autodeterminación, derivamos la satisfacción de las necesidades psicológicas básicas como mediador entre el liderazgo de servicio y los resultados de salud mental. Los resultados de los análisis de regresión mostraron que el liderazgo de servicio mejoró la salud mental de los empleados. Mientras que esta relación fue mediada por la satisfacción de la necesidad básica tanto para el agotamiento emocional como para el crecimiento personal, en términos de mediación indirecta. El liderazgo de servicio alimentaba las necesidades psicológicas básicas de los empleados, haciéndolos sentirse menos agotados emocionalmente mientras mostraban un mayor crecimiento personal. El cuarto estudio complementa el tercer estudio añadiendo condiciones límite relacionadas con los empleados. Específicamente, en el estudio 4, utilizando una muestra transversal de estudiantes ocupacionales de una Universidad Alemana de Ciencias Aplicadas ($n = 504$), el mismo modelo de mediación del tercer estudio se amplió para incluir las teorías de liderazgo implícito de los empleados. Se utilizaron análisis de regresión para calcular modelos de mediación moderada. Los resultados mostraron que el liderazgo de servicio satisface las necesidades psicológicas básicas de los empleados más fuertemente cuando las teorías de liderazgo implícito de los empleados son congruentes con el tipo ideal de liderazgo de servicio, específicamente baja tiranía y alta sensibilidad. Por lo tanto, si el empleado tiene una idea prototípica de un líder tiránico, esto debilita el resultado positivo del liderazgo de servicio en la salud mental. Si el empleado a su vez tiene una idea prototípica de un líder empático (sensibilidad), esto fortalece la conexión entre el liderazgo de servicio y

la salud mental a través de la satisfacción de las necesidades básicas. En resumen, esta tesis podría contribuir a los siguientes hallazgos: Primero, se podrían evaluar empíricamente otros antecedentes del liderazgo de servicio. En segundo lugar, podría demostrarse que el liderazgo de servicio está positivamente relacionado con las variables relacionadas con la salud mental tanto a nivel de empleados como de líderes. Tercero, los mecanismos psicológicos a nivel de líder (significación experimentada) y a nivel de empleado (satisfacción de necesidades psicológicas básicas), así como las condiciones límite específicas relacionadas con el empleado (teorías de liderazgo implícitas), que puede fortalecer o debilitar las relaciones estudiadas, podría ser identificado. Contribuciones teóricas, implicaciones prácticas y futuras direcciones de investigación y concluir cada uno de los estudios, y en una discusión general toda la tesis.

Palabras clave: liderazgo de servicio; agotamiento emocional; crecimiento; salud mental, liderazgo, psicología; psicología de la salud ocupacional

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ACRONYMS AND ABBREVIATIONS

AL	Authentic Leadership
APA	American Psychological Association
AVE	Average Variance Extracted
BNS	Basic (Psychological) Need Satisfaction
CBSEM	Covariance-based SEM
CEO	Chief Executive Officer
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CI	Confidence Interval
CL	Compassionate Love
COR	Conservation of Resources
CR	Composite Reliability
CSE	Core Self-Evaluations
CVD	Cardiovascular Disease
D-A	Demands-Abilities
E/E	Entitlement/Exploitativeness
EE	Emotional Exhaustion
EFA	Exploratory Factor Analysis
EL	Ethical Leadership
EO	(Religious) External Orientation
ESLB	Essential Servant Leadership Behaviors
FLS	Flourishing
FRL	Full Range of Leadership
GE	Grandiose Exhibitionism
I-WHO	Institute of Work, Health and Organisations

IFT	Implicit Follower Theory/Theories
IL	Instrumental Leadership
ILT	Implicit Leadership Theory/Theories
IO	(Religious) Internal Orientation
JD-R	Job Demands-Resources
LA	Leadership/Authority
LMX	Leader-Member-Exchange
MBE	Management by Exception
MBI	Maslach Burnout Inventory
MBI-ES	Maslach Burnout Inventory for Educational Setting
MBI-GS	Maslach Burnout Inventory General Setting
MBI-HSS	Maslach Burnout Inventory for Human Services and Health Care
MLQ	Multifactor Leadership Questionnaire
NAR	Narcissism
NIOSH	U.S. National Institute for Occupational Safety and Health
NIRO	New Indices of Religious Orientation
NPI	Narcissistic Personality Inventory
OBSE	Organization-based Self-Esteem
OCB	Organizational Citizenship Behavior
OCBO	Organizational Citizenship Behavior: Organization
OCBS	Organizational Citizenship Behavior: Supervisor
OHP	Organizational Health Psychology
OLS	Ordinary Least Squares
P-E	Person-Environment
QO	(Religious) Quest Orientation
RMSEA	Root Mean Square Error of Approximation
S-V	Supplies-Values
SCBCS	Santa Clara Brief Compassion Scale
SDT	Self-Determination Theory
SEM	Structural Equation Model(ling)
SEN	Sensitivity (ILT)
SIT	Social Identity Theory
SL	Servant Leadership
SLS	Servant Leadership Survey

TLI	Tucker-Lewis Index
TPWB	Theory of Purposeful Work Behavior
TYR	Tyranny (ILT)
VBSEM	Variance-based SEM
W-BNS	Work-Related Basic Need Satisfaction Scale
WHO	World Health Organization
WM	Work Meaningfulness

1 PURPOSE

“Before you are a leader, success is all about growing yourself. When you become a leader, success is all about growing others.”

Jack Welch, American Businessman

1.1 MENTAL HEALTH AT THE WORKPLACE

Mental illnesses are the primary cause of disability after musculoskeletal disorders and, depending on the severity of seasonal effects, e.g., because of influenza epidemics, also respiratory diseases (Grobe, Steinmann, & Gerr, 2019; Knieps & Pfaff, 2019; Marschall, Hildebrandt, Kleinlercher, & Nolting, 2020; Marschall, Hildebrandt, Sydow, & Nolting, 2017). The duration of disability for a case with mental illness is 45 days on average (Grobe et al., 2019), although these numbers vary between different health insurance companies (e.g., Marschall et al., 2020). Typically, disability due to mental illness is of longer duration than, for example, respiratory and musculoskeletal disorders (Grobe et al., 2019; Knieps & Pfaff, 2019; Marschall et al., 2020, 2017). For example, 6.1% of cases were due to psychological diseases and accounted for 17.1% of absenteeism (Marschall et al., 2020). More than twice as many cases (14.5%) were due to musculoskeletal disorders and accounted for 21.2% of absenteeism (ibid.). Figure 1 illustrates that mental illnesses play an important role.

It is equally alarming to see the historical development of mental illness. While at the end of the 1990s, the number of days of absence per 100 insured persons was under 100, by 2010 it had risen to just under 170 days of absence per 100 insured persons, and at the time of writing, there are 260 days of absence per 100 insured persons (Marschall et al., 2020). This corresponds to around a threefold increase within the last 20 years. These figures clearly show that mental illness is a growing problem for the economy. For further details, refer to figure 2.

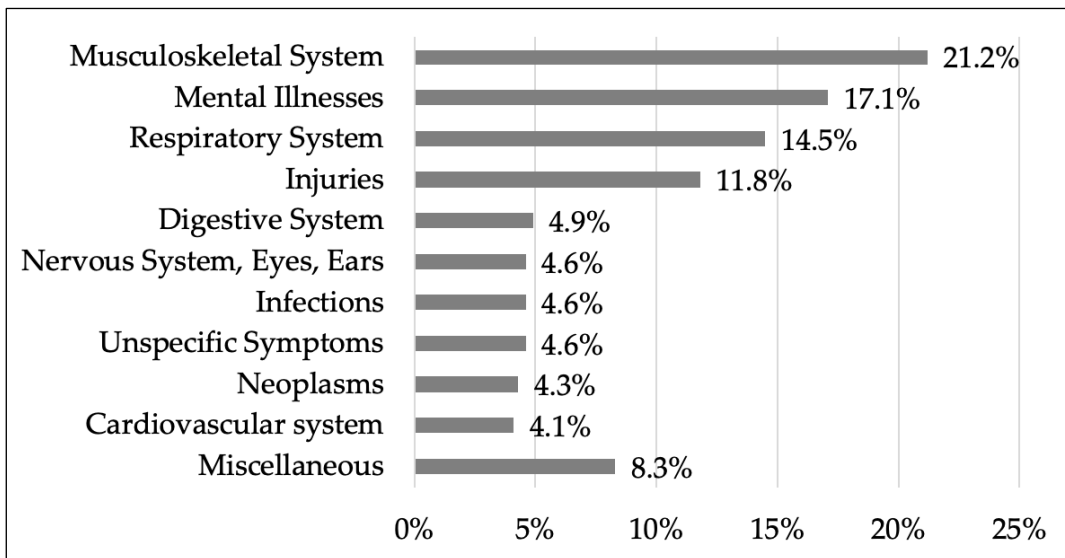


Figure 1: Percentage of the Top 10 Illnesses in the Days of Absence According to Marschall et al. (2020, p. 17)

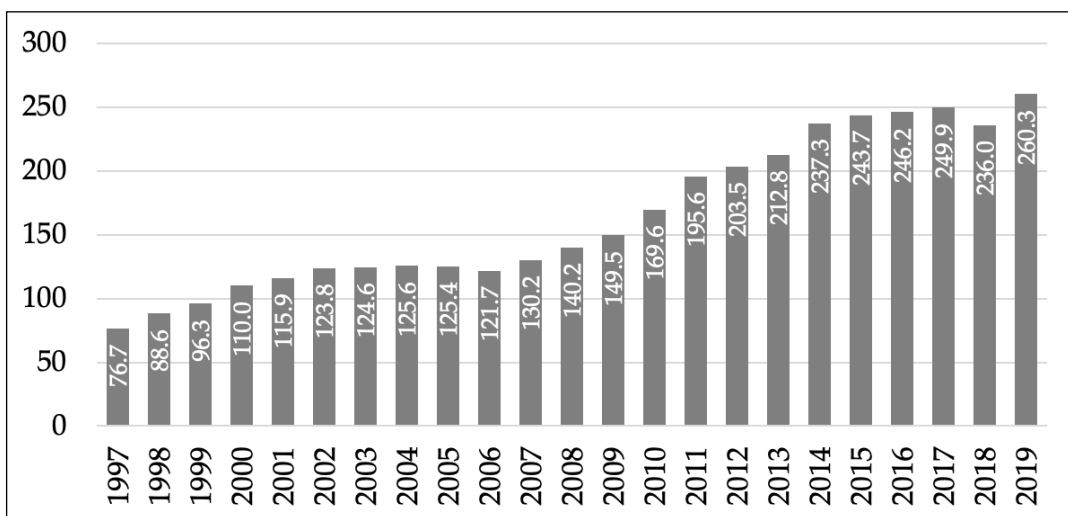


Figure 2: Days of Absence per 100 Insured Persons due to Mental Illnesses from 1997 to 2019 According to Marschall et al. (2020, p. 19)

In the class of mental illnesses, by far the dominant individual diagnoses are depressive episodes with 75.9 days of absence per 100 insured persons and recur-

rent depressive disorders with 29.5 days of absence per 100 insured persons (Marschall et al., 2020). Although leaders show less sickness-related absenteeism overall, this difference is particularly pronounced for male leaders with musculoskeletal disorders (Knieps & Pfaff, 2019). This observation is primarily attributed to the fact that the proportion of physically demanding and stressful work is higher among employees¹ than among leaders² (ibid.). In view of the constantly growing “epidemic” of mental illnesses, it is striking that the difference in days of absence due to mental illness between employees and leaders is marginal (ibid.). This observation is not surprising, since leaders are also exposed to particular psychosocial stresses and strains (ibid.). Consequently, mental illness does not distinguish between individuals with or without leadership responsibility. Both “leader stress” and “employee stress” are actual risks of today’s work environment.

This increased absenteeism, caused by mental illness, which in turn is exacerbated by stress and strain in the organizational context due to high job demands, leads to serious problems for the organization, such as reduced effectiveness (Darr & Johns, 2008). The meta-analysis by Darr and Johns (2008) showed a small positive but significant effect of workload on absenteeism mediated by psychological and physical symptoms. Further studies have demonstrated this positive correlation between workload and a negative effect on organizational outcomes (Diestel & Schmidt, 2012; Westman & Etzion, 2001). In addition to job demands and job control, self-determination and autonomous motivation at work play an important role in the perception of stress and well-being at work (Fernet, Guay, & Senécal, 2004; Parker, Jimmieson, & Amiot, 2010). It is undisputed that autonomous motivation, high levels of self-determination, and satisfaction of basic psychological needs are essential precursors to proper mental health (Deci & Ryan, 2000, 2008a, 2008b). Ryan and Deci’s research in the field of self-determination theory and its mechanisms in the work environment appears to

¹ In this thesis, the term employee is used for individuals without a leadership role. Throughout the text, the terms follower and subordinate are used synonymously with employee.

² In this thesis, the term leader is used for individuals who hold a leadership role, i.e., they are responsible for leading 1-n employee(s) and/or 1-n leader(s). A distinction to the term manager is given in the course of the thesis.

provide comprehensive approaches to address the problem of increasing mental stress, strain, and burnout at work. Research in recent decades, beginning in the late 1970s, has shown leadership as an integral determinant of health-related variables in the work context (Gavin & Kelley, 1978; Gilbreath & Benson, 2004; Hetland, Sandal, & Johnsen, 2007; Kelloway, Weigand, McKee, & Das, 2013).

It is therefore not surprising that in the last decade, increasing research has been conducted into the relationship between leadership and health. Special concepts for “health-oriented leadership” have been developed (Franke & Felfe, 2011), which, not least due to legal framework conditions such as workplace health management (Neufeld, 2011), attribute responsibility for employees’ health in the work context to the leader. In recent years, servant leadership has emerged as a widely accepted and strongly researched leadership theory, also regarding health-promoting leadership (Panaccio, Donia, Saint-Michel, & Liden, 2015). Metaphorically speaking, servant leadership is about turning the organization chart upside down (Coetzer, Bussin, & Geldenhuys, 2017b; Elke & Ziemeck, 2006; Grönroos, 1998). This leadership model does not rest upon legitimate, reward or coercive power (French & Raven, 1959), instead it stands for power-sharing and empowerment of employees (Greenleaf, 1977; Greenleaf & Spears, 2002). Servant leadership, first introduced by Robert K. Greenleaf in the 1970’s (e.g., Greenleaf, 1977), promises that the employees become servants themselves, which increases the company’s long-term success and profitability and lowers the risk of customer churn (Braham, 1999; Greenleaf, 1977). The servant leader acts as a “*primus inter pares*” (first among equals; Laub, 1999; Rachmawati & Lantu, 2014; Reynolds, 2011; Rimes, 2011; van Dierendonck & Nuijten, 2011). As a consequence, servant leaders do not use the above-mentioned bases of power to manage the organization and get things done, they convince their employees by identifying and fulfilling their needs (Rachmawati & Lantu, 2014). Chiniara and Bentein (2016) have published first research findings on how servant leadership and performance-related outcomes are linked through the fulfillment of work-related psychological needs, namely, autonomy, competence, and relatedness (Deci & Ryan, 2000).

The previous discussion has shown that mental illness affects both employees and leaders and that leadership can be a key to promoting mental health in the workplace. Therefore, this dissertation examines the relationship between servant leadership and mental health in four different empirical studies. Not only

analyzing relationships on a follower level but also investigating servant leadership outcomes on a leader level. Are there just positive and health-promoting outcomes or does servant leadership come with side effects, especially for the leader engaging in this employee-serving behavior?

1.2 RESEARCH QUESTIONS

The research methodology of this project is based on a theoretical review of the literature and empirical studies to be conducted. The empirical studies are theory-driven by the review of the latest state-of-the-art literature from professional and scholarly journals. Analyses of the collected data are done with quantitative analytical methods such as descriptive and inferential statistics.

First, the current state of research on servant leadership and its antecedents, outcomes, mediators, and moderators will be given. Upon this literature basis, research questions have been developed, aiming to fill the actual research gaps of this topic. As the dissertation project is divided into different empirical studies to be performed, the research questions will be structured into four studies as shown in table 1.

Table 1: Research Questions of the Empirical Studies

# Study	Research question
1.	Why do leaders engage in servant leadership?
2.	How is enacting in servant leadership related to leaders' emotional exhaustion and flourishing?
3.	How servant leadership relates to followers' emotional exhaustion and flourishing?
4.	Does servant leadership always match the followers' expectations?

Servant leadership, as a normative leadership model, and different psychological theories, like self-determination theory (Deci & Ryan, 2008b), theory of purposeful work behavior (Barrick, Mount, & Li, 2013), and other influential theoretical frameworks such as conservation of resources theory (COR; Hobfoll, 1989;

Hobfoll, Halbesleben, Neveu, & Westman, 2018) build the starting point for the theoretical deduction of the empirical studies. All studies are straightforward derived from theory. Hence, the research design of each study is well-founded in theory. Each theory is explicated and associated with concrete research questions. I deduce the hypotheses following a theoretical reasoning. For every study, the method, namely, design, sample, procedure, measures, and statistical analyses are individually adapted to the demands. After sampling the data with psychometric and sociodemographic scales of high reliability and validity, the results – descriptive statistics and hypothesis tests– are presented. Following this, I interpret the results, and I discuss practical implications, limitations, and future research. This approach applies to all studies conducted to ensure a high standard in the quality parameters.

I make an overall discussion and concluding remarks to summarize the consecutive studies performed within this dissertation. The goal of this thesis is to push on the state of scientific knowledge in the intersection of leadership and occupational health research, especially regarding servant leadership.

1.3 CONTRIBUTION TO SCIENCE AND PRACTICE

Although transactional and transformational leadership models are already proved as good ways to lead people in organizations, they have also shown to be risky and conceptually unclear (van Knippenberg & Sitkin, 2013). Therefore, this research aims to study how, when, and why servant leadership relates to followers' and leaders' mental health at work on an individual level.

The review of literature on servant leadership shows that there is still a lack of knowledge regarding the antecedents of servant leadership (Eva, Robin, Sendjaya, van Dierendonck, & Liden, 2019; Xu, Zhong, & Liden, 2020). There has been a study showing a strong relationship between some personality dimensions, especially agreeableness and servant leadership, grounded in the theory of purposeful work behavior (Brouns & Externbrink, 2018). Similar effects have been shown by Hunter et al. (2013). There is also some further knowledge on the antecedents of servant leadership, summarized by Liden, Panaccio, Meuser, Hu, & Wayne (2014). However, it has not been empirically researched as to which role other factors, e.g., virtuous attitudes such as compassionate love (van

Dierendonck & Patterson, 2015) and religiousness, play in becoming a servant leader.

As stress in work life is an ongoing “epidemic” (e.g., Knieps & Pfaff, 2019; Stilijanow & Bock, 2013), not just for employees but also for leaders, it is a question of theoretical and practical relevance, which effect servant leadership has on leaders’ mental health, because this form of relationship-oriented leadership may be very demanding for leaders. Putting subordinates first and emotional healing, for example, are the altruistic dimensions of servant leadership (Liden, Wayne, Zhao, & Henderson, 2008), which may cause emotional stress for the leader. The second study tests the relationship of servant leadership and leaders’ mental health and further investigates how this relationship is working.

On a follower level, it has been shown that servant leadership can lower indicators of psychological strain (Rivkin, Diestel, & Schmidt, 2014; Tang, Kwan, Zhang, & Zhu, 2016). Although studies have already modeled mediators between servant leadership and health-related outcomes based on self-determination theory, showing that both psychological capital (Lohrey, 2015) and basic psychological need satisfaction (Feng, 2015) mediate this relationship, in this thesis the two continua model of mental health contributes to better differentiate the relationships of servant leadership on stress and well-being. This monograph examines the basic psychological work-related needs, namely, autonomy, competence, and social relatedness, as potential mediators of the negative relationship of servant leadership to employees’ mental health. This approach integrates and advances the work of Chiniara and Bentein (2016).

Furthermore, it is of theoretical and practical interest when servant leadership nurtures the basic psychological needs of followers. Questioning the moderators of the relationship between servant leadership and psychological need satisfaction is crucial as it may have negative side effects. Is it possible that some followers have strongly shaped implicit leadership prototypes in their mind, which does not fit in the altruistic picture of servant leadership? Those employees may not experience high psychological need satisfaction when leaders enact servant leadership. This is an example of the theoretical and practical relevance of knowing more about potential moderators neutralizing the positive sides of servant leadership. Brouns and Externbrink (2018) demonstrated the neutralizing effect of a low ethical organization climate for the emergence of servant leadership. Look-

ing at implicit leadership theories (Epitropaki & Martin, 2004, 2005), the fourth study aims at moderators on an individual dispositional level.

Altogether, the results of the different studies should contribute to science and practice as follows: Knowledge of further antecedents of servant leadership could help organizations in questions of personnel selection and development. To better understand the mechanisms (psychological processes) of the relationship between servant leadership and both leaders' and followers' mental health is of equal interest for science and practice. Especially as studies focusing on leaders' mental health are currently scarce (Barling & Cloutier, 2017). Lastly, the individual-level moderators of the before-mentioned relationship are of great importance, as there may be side effects of servant leadership depending on boundary conditions. This is important to know when implementing anticipatory measures of those potentially negative effects.

1.4 STRUCTURE OF THE THESIS

This chapter is your guide through this thesis. It provides an overview of the structure of the thesis. The thesis addresses research questions at the intersection of occupational health psychology and leadership psychology. This structure allows a compact introduction to the two areas of psychology relevant to the thesis. The overview outlined below is the common thread that leads through the thesis. This chapter supports the reader in understanding the work in its parts and to grasp it as a complete work. I will present the basic structure chapter by chapter to finally create an overall picture.

The first main chapter, *Purpose*, clarifies the purpose of the thesis, poses the research questions to be answered, and elaborates on the resulting contribution to research and practice. I outline the structure of the thesis to give the reader a better insight into the thesis.

The second main chapter, *Theoretical Foundations*, lays the theoretical basis for the thesis. It includes an introduction to occupational health psychology and an introduction to leadership psychology. Both chapters are structurally similar and present a brief history and a definition, followed by a presentation of prevalent theories in the respective research area, and finally, concluding remarks are made. In a third chapter, I introduce the construct of servant leadership. Besides

the conceptualization and measurement methods, I present empirical findings from research and present the current nomological network of servant leadership.

In the third main chapter, *Empirical Findings on Leadership and Mental Health*, I present research results at the intersection of occupational health psychology and leadership psychology. I have separated the empirical findings that focus on the effect of leadership on employees from the findings that look at the effect of leadership on leaders. Separating these two levels, I have outlined the health-promoting and the health-impairing findings. This main chapter gives the reader a comprehensive overview of the state of research on leadership and mental health.

The fourth main chapter, *Intermediate Discussion*, brings together the findings from the previous main chapters and lays the foundation for the development of the conceptual research model. The conceptual research model is the basis for the empirical studies to be conducted. I also discuss methodological considerations for the practical implementation of the studies in terms of research planning.

The fifth main chapter, *Empirical Studies*, successively presents the four studies conducted to address the research questions. The studies are all structured identically. First, I develop the hypotheses, then I describe the method, whereupon I present the results and finally discuss these results. This uniform structure follows the common structure of empirical studies in academia. This chapter contains the primary contribution of the thesis to respond to the research questions raised.

The sixth and final main chapter, *Overall Discussion and Concluding Remarks*, concludes the thesis. Although the results of the individual studies will have been already been discussed independently, an overall look at the results and an overarching discussion would be missing. This chapter serves this purpose. First, I have outlined the theoretical and second, practical implications of the empirical studies. Finally, I have discussed limitations and potentials for future research.

The following figure 3 is derived from the previously described and gives a structured overview of the structure of the thesis.

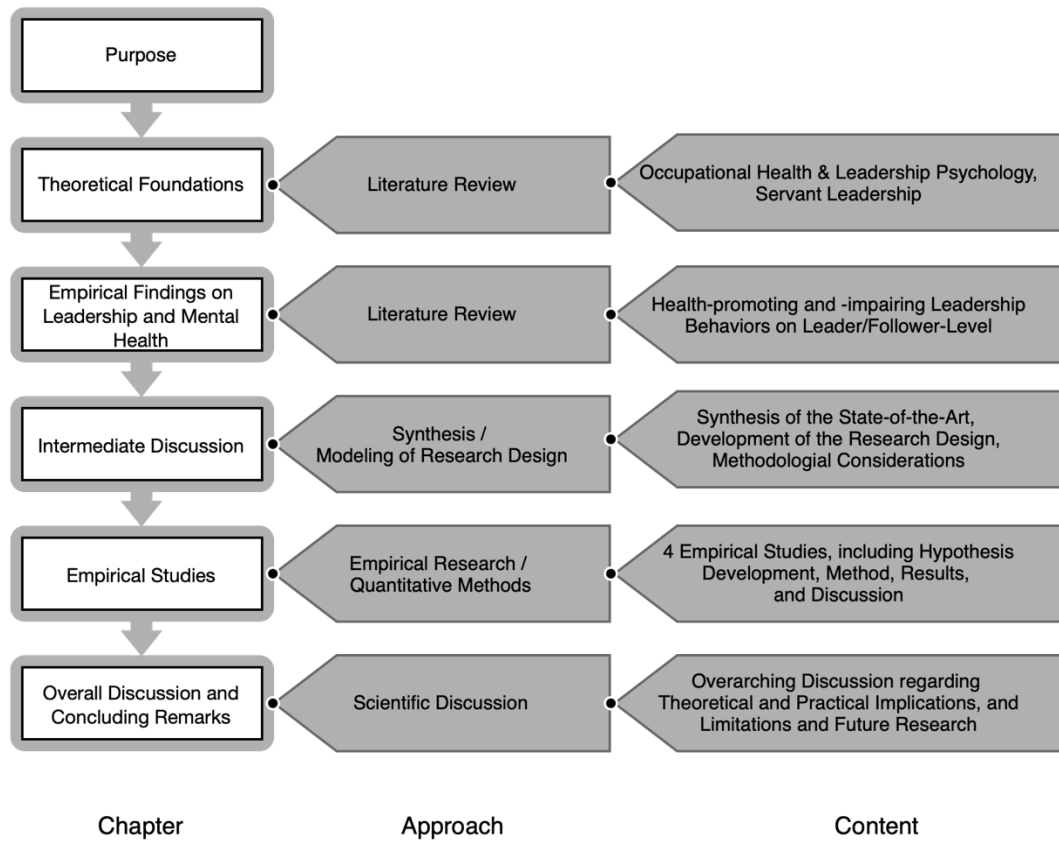


Figure 3: Structure of the Thesis

2 THEORETICAL FOUNDATIONS

“Whenever a theory appears to you as the only possible one, take this as a sign that you have neither understood the theory nor the problem which it was intended to solve.”

Karl Popper, Philosopher, Academic & Social Commentator

2.1 INTRODUCTION TO OCCUPATIONAL HEALTH PSYCHOLOGY

2.1.1 History and Definition

This thesis investigates the continuum between mental health and illness of people in the work context as outcome variables, i.e., specifically of employees and leaders. Against this background, it is relevant to explicate the subdiscipline of work and organizational psychology, occupational health psychology (OHP). To specify which aspects of OHP are dealt with in this thesis and which are not, a short historical outline of the origins of OHP is given and then it is defined as what is understood by OHP today.

A brief history of OHP. For a brief historical outline of OHP, I primarily refer to the work of Barling and Griffiths (2011), which in the version first published in 2003 is also regularly used as a reference in OHP literature (e.g., Blustein, 2008; Schaufeli, 2004):

The first publications dealing with the impact of work on health date from the middle 19th century. Works by Friedrich Engels and Karl Marx are cited, which represent the first philosophical basis for the later concepts of OHP. However, it took another 100 years before these ideas developed into a field of research consisting of a mix of psychology, sociology, management, and medicine, which today could be called the cradle of OHP. Barling and Griffiths (2011) highlight two parallel lines of development in the history of OHP: early developments in the United States and in Europe. Following this structure, they have built up their chapter, and therefore, I will also briefly describe both lines (Barling & Griffiths, 2011):

In the US American line of development, Frederick Taylor is quoted first and foremost for his approach to scientific management, which was meant to optimize economic success. Scientific management has two assumptions: Thinking work, such as the planning of work steps and the design of processes, should basically be separated from the execution of the work, the actual doing. Furthermore, the emotions of people should be separated from work, as they are assumed to be counterproductive. Today's approaches, which will be presented later, form the counterdraft to these ideas of Taylor.

Perhaps the most influential experiments that followed Taylorism were those at the Western Electric plant in Hawthorne. These studies were primarily concerned with the effects of moderating working conditions, such as lighting at the workplace or breaks. The researchers saw that, regardless of which conditions were modulated, employee productivity increased. The explanation for this result of the experiment was that the dedicated attention given to the employees had an influence on their work behavior. This so-called Hawthorne effect is contrary to the second assumption of Tayloristic scientific management, since here emotions clearly influence behavior in the work context. Since then, psychology has been increasingly used in management theory.

Barling and Griffiths (2011) also focus on two other developments in early US American history which, in their view, had a formative influence: Abraham Maslow has also transferred his theories into the context of OHP and has put forward the thesis that only mentally healthy people can be motivated to do their jobs and thus develop their full potential. In the mid-1960s, this thesis was new and far beyond common sense. Another very prominent development was the emergence of job design theories, which go back to Herzberg's considerations postulating the influence of working conditions on work results and mental health. Contrary to Frederick Taylor's approach to scientific management, the increased use of employees' skills and the recognition given to them, e.g., by leaders, play a role in work-related performance and mental health. In the late 1970s, Hackman and Oldham developed the job characteristics model from this line of research.

The early European line of development was primarily concerned with proving in empirical studies and experiments, that Taylorism had negative effects on the work-related health of employees (Barling & Griffiths, 2011): One of the

key findings in the 1950s by Trist and Bamforth in the UK was the recognition that the origin of work demands and the degree of participation in decision-making processes, such as the experience of autonomy, have a positive impact on mental health. In Scandinavian countries, Finland, Denmark, Norway, and Sweden, there was also a wealth of research in the 1970s and 1980s on the effect of work design on mental health, which also highlighted Taylorism as a health risk.

In addition to the effects of work in organizations on physical and mental health, OHP also looks at the effects of unemployment on people's health to draw a holistic picture of work-related health (Barling & Griffiths, 2011). The basic consensus regarding work and unemployment is that in the long run, the beneficial effects of work outweigh the risks of work (Barling & Griffiths, 2011; Waddell & Burton, 2006): Unemployment should be kept to a possible minimum, as it has, amongst other things, a negative impact on overall health, whereas work in principle provides benefits. Since the topic of unemployment and nonwork is not the subject of this thesis, no further elaboration is given.

Since the 1990s, organizations such as the U.S. National Institute for Occupational Safety and Health (NIOSH), the American Psychological Association (APA) and the Institute of Work, Health and Organisations (I-WHO) have shaped the discipline of OHP (Barling & Griffiths, 2011).

Definition of OHP in general and in the context of the thesis. The most recent NIOSH definition is as follows: "OHP concerns the application of psychology to improving the quality of work life, and to protecting and promoting the safety, health and well-being of workers" (The National Institute for Occupational Safety and Health (NIOSH), 2013, s.p.). The protection of health refers in particular to measures taken in the working environment, whereas the promotion of health refers to interventions at the individual level to specifically promote the resources and knowledge of employees (The National Institute for Occupational Safety and Health (NIOSH), 2013). In addition to the definition of NIOSH, Schaufeli (2004) suggests four further aspects of OHP that are necessary to clarify the term:

1. The understanding of health is a positive concept, including personal and social resources, and physical health. This is in line with the World Health Organization (WHO) (2014) understanding of health,

which states that “[h]ealth is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (p. 1). Consequently, the concept of occupational mental health is widely understood and thus includes behavioral, cognitive, and motivational aspects in addition to affective well-being.

2. Occupational health, as described in the history of OHP, includes not only health at work, but also the health effects of unemployment, and interactions between work and private life.
3. OHP occurs at four different, but closely meshed levels of analysis:
 - a. Individual employee
 - b. Job environment
 - c. Organizational environment
 - d. External environment
4. OHP is a discipline that has a firm place in both science and practice. The OHP aims to understand the psychological processes and to contribute to the improvement of work-related health.

The concept of OHP must be clarified against the background of the research questions of this thesis. Regarding the NIOSH definition, this thesis focuses on the relationships of leadership and followers’ and leaders’ mental health. I explain the dedicated understanding of the mental health concept as a two continua model in the following. This will also be in line with the current WHO definition that health is not defined by the mere absence of disease (World Health Organization (WHO), 2014). Concerning the consideration of unemployment in the discipline of OHP, this thesis will not consider these aspects, as it is in the leadership context of work. The overarching concept of the studies to be conducted will consider the level of analysis of the individual, i.e., employees or leaders, and the level of job environment, which includes leadership style. As a discipline at the intersection of research and practice, the aim of this thesis is to derive both research-related insights into psychological processes, i.e., mediators, and practice-related recommendations, i.e., antecedents and moderators, from the results.

Towards a two continua model of mental health. Traditionally, OHP has focused strongly on a disease model, which is reflected, for example, in its publications in the *Journal of Occupational Health Psychology*: Over 90% of the articles pub-

lished deal with problems such as accidents at work, violence at work, bullying, and burnout (Schaufeli, 2004). Since the turn of the millennium, the concepts of positive psychology, which focus on human strengths and try to unfold the inherent potential of the human being, have increasingly found their way into the field (*ibid.*). Following Schaufeli's call, I operationalize mental health on a two continua model, which does not completely lose sight of the disease model, but also includes a construct of positive psychology, namely flourishing, in the studies.

Keyes (2009) argues that mental health and mental illness are not the opposite ends of a single continuum and, for this reason, suggests that mental health should be considered as a holistic state comprising two dimensions: (1) mental illness and (2) mental health, each on a separate continuum. Therefore, Keyes (2016) proposes a two continua model, which is in line with the WHO definition of health: From this definition there also emerges a hypothesis to be tested that health is not only the absence of illness but also the presence of happiness and well-being. If this hypothesis can be confirmed, it would have implications for "problem solving" in OHP. Even if one could solve all mental illnesses, this would not imply that all people reach the state of flourishing. This reinforces Schaufeli's (2004) postulate: moving away from the disease model towards a positive health model. Therefore, we must focus on improving mental health to become healthier in the long term and then remain healthy.

Flourishing as a concept can be a vehicle for bringing this view of positive psychology into research and practice. According to Keyes (2016), flourishing is divided into hedonic and eudaemonic well-being, i.e., being emotionally healthy and satisfied with oneself and one's life on the one hand and the positive functioning of social and psychological well-being on the other. The psychological construct of flourishing stands for achieving a well-balanced life, in which the individual feels good when he or she is functioning well (Keyes, 2016). In the development of a scale for assessing flourishing, Diener et al. (2010) used various theories and concepts, including basic psychological needs of self-determination theory, social and psychological capital, purpose and meaning in life, and social exchange. As a result, they have developed the psychosocial flourishing scale (Diener et al., 2010), which in this thesis represents the continuum of mental health (Keyes, 2016).

In the sense of the two continua model, a second continuum for measuring mental illness is still to be introduced. In the work context, burnout offers itself as a proxy for the state of mental illness. At the beginning of the research, burnout was a very unclearly defined concept, as the term was used to describe different phenomena, whereby these basically shared a consensus (Maslach, Schaufeli, & Leiter, 2001). From this, Maslach (1982, 1998) developed a three-dimensional concept of burnout with the dimensions of emotional exhaustion, depersonalization, and reduced personal accomplishment. These core dimensions were developed primarily for certain professions, such as the Maslach Burnout Inventory for human services and health care (MBI-HSS) and the MBI-ES for the educational setting, as these reflect very clearly the extensive interaction with other people (Maslach et al., 2001). As the need for a more generalized scale for burnout had become apparent, the MBI General Survey (MBI-GS) was developed, which has slightly adapted dimensions, namely, exhaustion, cynicism and reduced professional efficacy (*ibid.*). Although burnout is a complex syndrome, there is consensus that the dimension of emotional exhaustion is the central component and manifestation of burnout. While emotional exhaustion is a stress-related dimension of the model, it is, in itself insufficient for a diagnosis of burnout (*ibid.*).

As this thesis is not concerned with measuring the exact phenomenon of burnout; emotional exhaustion alone appears to be a suitable measure of mental illness, since “emotional exhaustion closely resembles traditional stress reactions that are studied in occupational stress research, such as fatigue, job-related depression, psychosomatic complaints, and anxiety” (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001, p. 499). In addition, emotional exhaustion, more than the other two dimensions, has been associated with stress-related health indicators in empirical studies, although these results must be interpreted with caution because self-reports have been used and study design does not permit causal inferences (Maslach et al., 2001). Cropanzano, Rupp, and Byrne (2003) also concluded that, from an empirical and conceptual point of view, emotional exhaustion captures the core of burnout and can be used as a general indicator of psychological strain at work. A low level of emotional exhaustion among employees was generally associated with many positive, desirable outcomes in work and organizational psychology. These included effective work attitudes and effective work behavior such as organizational commitment, turnover intentions, and or-

ganizational citizenship behavior (OCB), which has a positive effect on the organization itself (OCBO) and on the supervisor (OCBS), as well as job performance (Cropanzano et al., 2003). This is an example of why OHP is not an end in itself and why the outcomes ultimately relate not only to health-related variables but go far beyond them (e.g., OCB/O/S). The two continua of mental health and illness have a far greater impact on work-related outcomes than the totality of mental and physical health at work. To capture a holistic picture of mental health and illness in this thesis, in line with the call for a positive health model, a two continua perspective will be implemented as a central set of outcome variables in the empirical studies. In the empirical contributions of this doctoral project, both continua (mental health and illness) are subsumed in the term mental health in order not to impair the reading flow in the further course of the thesis. This does not affect the understanding of the concept of mental health as a model with two continua: Emotional exhaustion as a proxy for mental illness should be reduced and flourishing as an indicator of mental health and well-being should be fostered. The two continua show a certain amount of overlap, which implies a dependence of both constructs on the one hand and supports the WHO assumption that the mere absence of illness does not mean health and well-being.

2.1.2 Prevalent Theories

The following chapter introduces a range of theories, models, and concepts that are used in OHP. In particular, the chapter highlights how work in general can affect the mental constitution of both leaders and employees. Mental health and illness are understood by mental constitution in terms of the two continua model. Mental health impairment is thus understood to be the tendency for mental health parameters to deteriorate and/or a state of increasing signs of mental illness. Mental health promotion is the opposite of mental health impairment, i.e., the tendency for mental health parameters such as well-being and happiness to improve and/or signs of mental illness to decrease. At this point, it is important to emphasize that in this thesis, mental illness is not necessarily understood as a psychopathological manifestation, but rather emotional exhaustion has been chosen as an indicator of psychological stress at work. It is commonly known that without early intervention, psychological stress in the workplace can lead to serious psychopathological disorders, such as depression (Demerouti et al., 2001).

Following the general classification of theories, shown in table 2, according to Schaufeli (2004), first, theories and models are presented that integrate psychosocial factors as causal actors. More specifically, job demands, and job resources are introduced as critical variables for the relationship between work and mental health. Examples are the role stress model (R. L. Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964), job strain model (Karasek, 1979), person-environment fit model (Caplan, 1983), job demands-resources model (Demerouti et al., 2001; Schaufeli & Bakker, 2004), conservation of resources theory (Hobfoll, 1989), and Lazarus stress model (Lazarus & Folkman, 1984). Second, models have been described that are based on the social psychological theory of social exchange, such as the effort-reward imbalance model (Siegrist, 1996) or the social exchange model of burnout (Schaufeli, 2006; Schaufeli, van Dierendonck, & van Gorp, 1996). Third, the study examines theories that deal with motivational processes, such as the self-determination theory of Ryan and Deci (2000a) and the theory of purposeful work behavior (Barrick et al., 2013).

Table 2: Overview of OHP Models According to Schaufeli (2004)

Theoretical Foundation	Model(s) of OHP
Psychosocial factors as causal agents (e.g., job demands, job resources)	Role Stress Model, Person-Environment Fit Model, Job Demands-Resources Model, Conservation of Resources Theory, Lazarus Stress Model
Social exchange mechanisms	Effort-Reward Imbalance Model, Social Exchange Model of Burnout
Motivational processes	Self-Determination Theory, Theory of Purposeful Work Behavior

2.1.2.1 *Psychosocial Factors as Causal Agents of Stress*

Following the classification of theories and models in OHP (Schaufeli, 2004), the first category, psychosocial factors as causal agents of stress, is described. The predominant central theories and models are presented, as shown in table 2.

Role stress in organizations. First, the Role Stress Model is presented, whose basic theoretical considerations date to the early 1960s (R. L. Kahn et al., 1964). In addition to organizational role theory, there were also other lines of research in sociology and social psychology that used role theory concepts, e.g., functional role theory or structural role theory (Biddle, 1986). The birth of organizational role theory stems from the works of Gross, Mason, and McEachern (1958) and R. L. Kahn et al. (1964). In his review, Biddle (1986) summarized the organizational role theory as follows: It is typical for role theory that roles in an organizational context are related to social positions and are generated by normative expectations. On the one hand, these norms can vary between different individuals, and on the other hand, they coincidentally reflect the formal demands of the organization as well as the requirements of informal groups. These different sources of norms lead to role conflicts because they must assert opposing norms for their behavior. Role conflict is defined as the simultaneous occurrence of at least two irreconcilable expectations for the behavior of a person. Role conflict is one essential component of role stress (Jackson & Schuler, 1985; Örtqvist & Wincent, 2006). However, R. L. Kahn et al. (1964) conceptualized two so-called role stressors, role conflict and role ambiguity. According to these authors, role ambiguity results from an information deficit and the resulting lack of clarity in the personal occupational role, which in turn leads to a lack of awareness of the role, the associated goals, and inherent responsibilities. The expectations of colleagues and superiors of one's own role remain unclear. In fact, role stress can occur in any job, at any level of the hierarchy, and in any organization, whether in change or not (S. Schmidt, Roesler, Kusserow, & Rau, 2014). Organizational changes, the complexity of an organization, or even personal changes in the job can be factors contributing to role stress (R. L. Kahn et al., 1964). Both concepts, role conflict and role ambiguity, are linked to a certain degree, since both originate from the environment of the individual and may even be attributed to the same cause (R. L. Kahn et al., 1964). However, both are understood as distinct concepts, each of which can contribute in a unique way to the perception of stress in the individual. Over the years, there have been many studies on the discriminant validity of both concepts, for a summary of the literature and a meta-analysis, refer to the work of S. Schmidt et al. (2014).

Referring to the framework established by R. L. Kahn and Byosiere (1992), the relationship between work-related stressors arising from the environment and the personal perception of stress can be explained as follows: Role conflict or role ambiguity are understood as psychosocial stressors from the work environment that can lead to responses (psychological, physiological, or behavioral) in the affected employee. Frequently researched responses include health-related variables (e.g., Örtqvist & Wincent, 2006; S. Schmidt et al., 2014), but also behavioral variables such as motivation (e.g., Örtqvist & Wincent, 2006). Among the health-related variables, correlations with depression were also investigated (S. Schmidt et al., 2014). Depression was not only considered in its clinical form, but also minor depressive symptoms were already associated with impairments in employee's health, along with weakened job performance and increased absenteeism (ibid.). A systematic review has also shown that so-called subthreshold depression is associated with a significantly increased risk of major depressive disorder, the clinically evident form of depression (Cuijpers & Smit, 2004). The meta-analysis showed that both role stressors, role conflict and role ambiguity, were associated with depression (S. Schmidt et al., 2014). Previous reviews and meta-studies have not explicitly investigated depression (Jackson & Schuler, 1985; Örtqvist & Wincent, 2006; Tubre & Collins, 2000), but rather, for example, anxiety, where the co-morbidity is evident, but the constructs are distinct (S. Schmidt et al., 2014). As it should be a goal to have healthy employees in an organization, they concluded that, especially in today's unstable environment, it is of high importance that roles in the workplace are clarified and that the goals, tasks and responsibilities of each employee are defined (ibid.). Therefore, leaders require training to give employees a clear direction, which in turn takes the burden off the shoulders of the employees (ibid.).

House and Rizzo (1972) have already recognized the importance of leadership positions in role theory and the development of role stress through role conflict and role ambiguity (role perceptions). In the early 1970s, they developed a model that already conceptualized leadership as an independent variable in the emergence of role stress. Since this thesis deals with leadership and mental health of leaders and employees, the model will be presented below. In developing the model, House and Rizzo (1972) described both formalization practices and supportive leadership practices, which are already better known under the terms

initiating structure and consideration (House, 1971). In particular, initiating structure describes the extent to which the leader creates (psychological) structures for the employees, i.e., allocates tasks, establishes procedures, plans the work volume, and defines the expectations of the leader towards the employees (ibid.). Consideration, on the other hand, describes the degree to which the leader creates a psychological supportive environment that embodies friendliness, warmth, and helpfulness, factors that are conducive to the well-being of the individual and the group (ibid.). House and Rizzo (1972) argued that both initiating structure and consideration reduce role conflicts and role ambiguity, which in turn promotes positive outcomes such as employee satisfaction and perceived organizational effectiveness and reduces negative outcomes such as anxiety, stress, and propensity to leave. In addition to this indirect influence, they also described direct paths of leadership to these outcomes and questioned the fact that role stressors can also be direct independent variables and thus do not act as mediators. The model is shown in figure 4.

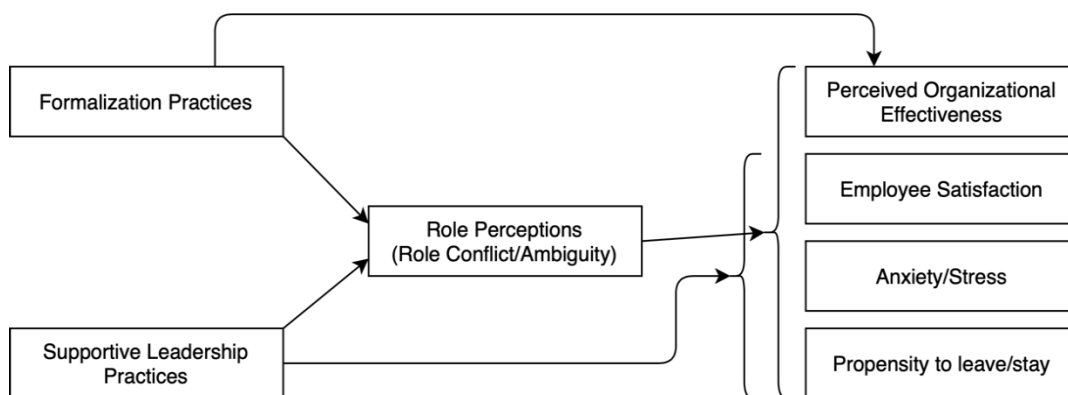


Figure 4: Model of Role Stress in Organizations According to House and Rizzo (1972, p. 476)

Recent empirical research also supports the assumptions of House and Rizzo's model. For example, Skogstad, Einarsen, Torsheim, Aasland, and Hetland (2007) have studied laissez-faire leadership –the absence of leadership– in terms of its links to role stressors, role conflict and role ambiguity. In their study, role stressors were intervening variables that mediated the link between laissez-faire

leadership, workplace bullying, and, ultimately, distress. Since laissez-faire leadership in the sense of the House and Rizzo (1972) model is to be understood as a psychological antithesis to initiating structure and consideration, the study is an inverse evidence for the validity of the model. To give just one more example, Brouns, Rexin, and Externbrink (2021) examined in their study the mediating role of role conflict between transformational leadership and irritation as well as affective commitment to change. A negative effect of transformational leadership, as a positive leadership theory, on role stressors in the context of an organizational change project was shown, which also supports the underlying idea of the model. Role conflict also acted as a mediator for the change-related outcomes mentioned above.

Combining job demands and job decision latitude. Another model developed in the late 1970s is the job strain model (Karasek, 1979), also referred to as the job demand-job control model (e.g., Sonnentag & Frese, 2003). Following Karasek (1979), the job strain model basically comprises two dimensions, the job demands on the one hand and the job decision latitude on the other. Job demands are understood to be those demands that are placed on the individual employee at the workplace. The job decision latitude is the individual scope for decision-making, which is determined by the decision-making authority and the employee's area of competence. In Karasek's model (1979), both dimensions, job demands and job decision latitude, were combined in a two-cross-two matrix, resulting in four quadrants, which were described as follows: First, passive jobs, which are characterized by low job demands and low job decision latitude. Second, jobs with low job demands and high job decision latitude, which are described as low-strain jobs. Third, high-strain jobs, which are characterized by high job demands and low job decision latitude. Finally, so-called active jobs, which have high demands and high job decision latitude. The matrix of the job strain model is shown in figure 5.

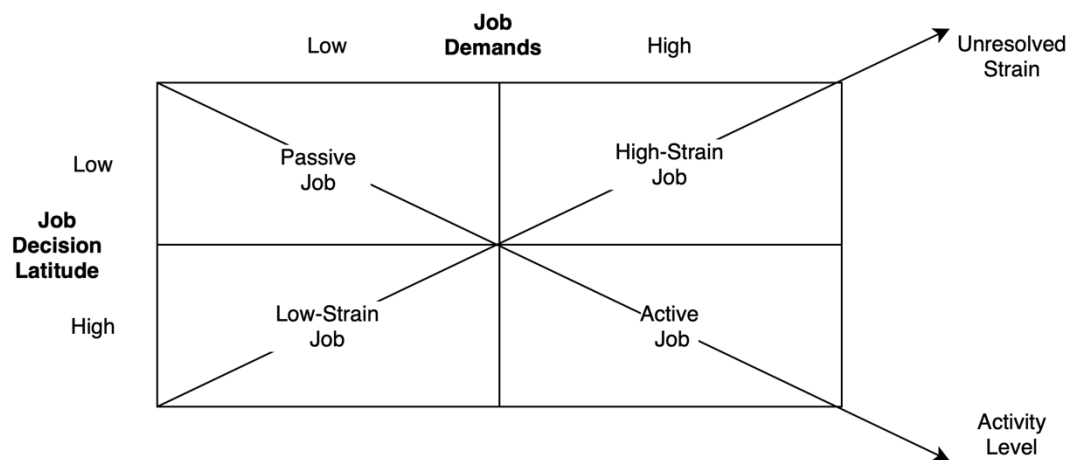


Figure 5: Job Strain Model According to Karasek (1979, p. 288)

Sonnentag and Frese (2003) summarized the different states of high job demands as follows: Employees react to stress when they are confronted with high job demands and at the same time have little room for maneuver (low job decision latitude). These high-strain jobs therefore carry the greatest risk of having negative effects on the (mental) health of the employees as they have very low control to shape the situations themselves. As soon as job decision latitude increases while job demands remain high, this state is characterized by desirable stress in terms of increased motivation and the opportunity to learn (Theorell & Karasek, 1996). The model assumes that job decision latitude can buffer the negative consequences of high job demands on health, which distinguishes active jobs from high-strain jobs.

However, why does control have a moderating effect on the relationship between high job demands and workplace stress? Over time, the active job leads to an increase in mastery experience, which can reduce the perception of strain in periods of work overload, thereby absorbing the negative psychophysiological effects on employees' health (Theorell & Karasek, 1996). However, this model has also been criticized in the literature (Kasl, 1996): Besides the discussion about the interaction effects described above, it has been criticized that there is a lack of conceptual clarity and sharp definitions of terms. Different terms were introduced for the same concepts, e.g., decision latitude, and control. Kasl (1996) attributes these inaccuracies to the fact that the model was mainly derived from secondary

research. For a detailed discussion and criticism of the job strain model, refer to Kasl's (1996) work.

In addition to the conceptual theoretical criticism, studies were conducted that tested various theoretical explanatory models in a sample. These studies were conducted to be able to compare models and resolve the following questions: Which ones best explain the theoretically supposed relationships? Which ones show the strongest effect sizes? The study by Elsass and Veiga (1997) compared the job strain model (job demand-job control model; Theorell & Karasek, 1996) with the person-environment (P-E) fit model. The P-E fit model had the highest predictive power in this study and was therefore superior to the job strain model in explaining job strain as an outcome (Elsass & Veiga, 1997). Nevertheless, the results suggest the relevance of job control, also known as job decision latitude, for job strain, whereby merely the perceived control is likewise meaningful (*ibid.*). Hence, the presence of job control is important, as long as this meets the employees' needs (*ibid.*). In another study, the job strain model was compared with the effort-reward imbalance model (de Jonge, Bosma, Peter, & Siegrist, 2000). The authors reported that the likelihood of effort-reward imbalance was consistently higher than those for job strain, with effort being the strongest predictor of emotional exhaustion and mental health impairment (de Jonge et al., 2000). Surprisingly, job control was the weakest predictor, although there is already empirical evidence of a link between low job control and coronary heart disease (e.g., Theorell & Karasek, 1996). Finally, the study could show that failing to honor pre-defined reward expectations following high efforts are associated with lower well-being of employees (de Jonge et al., 2000). These findings indicate that the P-E fit model and the effort-reward imbalance model may be superior to the job strain model in explaining the well-being of employees, although further research is needed (Sonnentag & Frese, 2003).

Considering personal characteristics and the environment in the emergence of stress. Another important OHP model is the P-E fit model mentioned above. The formalization of this model also dates to the 1970s (Van Harrison, 1978). The basic assumption of the model is that stress in the workplace occurs whenever there is an incongruence between the individual (P) and the environment (E). Consequently, it is neither the individual nor the environment alone that triggers stress-

ful situations and causes strain (*ibid.*). Two basic versions of the P-E fit model and its effect on stress are also described in the literature (Edwards, 1996):

The first version, the so-called supplies-values (S-V) fit, refers to the values (e.g., motives, interests, preferences, goals, etc.) of a person and how much the environment can fulfill these values. The underlying process of S-V fit is the cognitive match between the experienced and intended quality and/or quantity of conditions or events that encounter a person (e.g., an employee). The second version, the demands-abilities (D-A) fit, addresses the fit of demands posed by the environment and abilities of a person to meet those demands. While certain abilities, for example, skills and know-how, may improve over time, other abilities, such as energy (mental and physical), may diminish. The underlying process of D-A fit is the cognitive comparison of the demands stemming from the environment and the ability of a person to meet those demands. In his study, Edwards (1996) compared both versions of the P-E fit theory. He examined both models, S-V fit and D-A fit, for different outcome variables, namely, job dissatisfaction and tension. In the S-V fit model, job dissatisfaction decreased with increasing discrepancy between supplies and values. Furthermore, it was shown that there is an inverse relationship between job dissatisfaction and supplies and values, i.e., high job dissatisfaction in the state of both low supplies and values and vice versa. Tension, on the other hand, was positively associated with supplies and negatively associated with values, albeit to a lesser extent. These findings were contrary to the hypothesis, which led Edwards (1996) to two possible explanations: Higher supplies might have been associated with a higher workload or higher responsibility towards others, which could explain the higher tension. Alternatively, high supplies may have been associated with a higher level of activity, leading to physiological arousal, which may be associated with the subjective feeling of tension. For D-A fit, job dissatisfaction was negatively associated with both demands and abilities, i.e., the higher the demands and abilities, the lower the job dissatisfaction. This finding was also contrary to the hypothesis, whereby Edwards (1996) found a possible explanation in the job strain model (Karasek, 1979). Challenging jobs (demands) combined with a high job decision latitude (abilities) reduce job strain, possibly by giving employees the opportunity to show their skills and demonstrate competence (Locke, 1976; White, 1959), which is also supported by current findings in motivational psychology, since the experience of competence

has been recognized as one of the basic psychological needs (e.g., Deci & Ryan, 2000). Tension was linked positively to demands and negatively to abilities. Finally, Edwards (1996) summarized that both versions of fit were associated with both forms of strain (job dissatisfaction and tension), with D-A fit more strongly associated with tension and S-V fit more strongly associated with job dissatisfaction.

In addition to the two basic versions of P-E fit theory (D-A vs. S-V), there are further distinctions at the conceptual level. The individual (person) and the environment are divided into objective and subjective (Van Harrison, 1978): The objective person and environment represent the abilities, competencies, and needs of the individual as well as the actual environmental supplies and demands, independent of individual perception. The subjective person and environment refer to the above-mentioned aspects in the light of the individual's perceived reality. This leads to different perspectives on the fit or congruence between (1) subjective environment and subjective person, (2) objective environment and objective person, (3) objective and subjective environment, and (4) objective and subjective person.

The core tenet of P-E fit theory is that the objective person and environment influence the subjective person and environment and that incongruence between the subjective person and subjective environment results in strain (Caplan, 1987). Strain is increased as soon as the demands (E) exceed the abilities (P; D-A fit) or the values (P) exceed the supplies (E; S-V fit; Sonnentag & Frese, 2003). In the opposite case, depending on the content and importance of the dimension in question, the strain can decrease, remain the same, or increase (*ibid.*). At this point, refer to the research results of Edwards (1996). In addition to strain and resulting illness, there are other outcome variables of P-E misfit, i.e., the incongruence of objective and/or subjective fit between person and environment. These are on the one hand coping and on the other hand defense, which are described below (Edwards, Caplan, & van Harrison, 1998):

The term coping covers all efforts of the person to reduce the objective P-E misfit, for example, by an adaptation process of the objective person or by trying to change the objective environment, i.e., environmental mastery (French, Rodgers, & Cobb, 1974). If a person is exposed to excessive work demands, in either volume or complexity, they may try to increase abilities through training

or, together with the leader, seek to reduce the workload (Van Harrison, 1978). Defense, on the other hand, characterizes a person's efforts to reduce a subjective P-E misfit through cognitive distortion of the environment or the person (French et al., 1974). These distortions are generally related to subjective reality and do not imply any change in the respective objective equivalents (ibid.). The defense mechanisms include repression, projection, and denial, so that a person in a situation of overload overestimates their own abilities or play down or even ignore the overload (Edwards et al., 1998). These defense mechanisms can be extended to strain, so that although the subjective P-E fit is perceived as poor, the health condition is not considered threatened (Van Harrison, 1978). Both mechanisms, coping and defense, are interrelated (Edwards et al., 1998). It is conceivable, for example, that by coping, the objective P-E misfit is lessened or resolved, which in turn leads to an improvement in the subjective fit and ultimately to a reduction in strain (ibid.). Conversely, defense can counteract the negative effects of objective P-E misfit on subjective P-E misfit, thereby mitigating the effect of strain and illness (ibid.). In both cases, following the model of P-E fit theory, coping and defense influence strain via their (in-)direct effect on subjective P-E fit, while strain can have a feedback on the choice and success of coping and defense mechanisms to resolve P-E misfit (ibid.). After having introduced all relevant variables of the model and their relationships having been explained, the model is shown in figure 6.

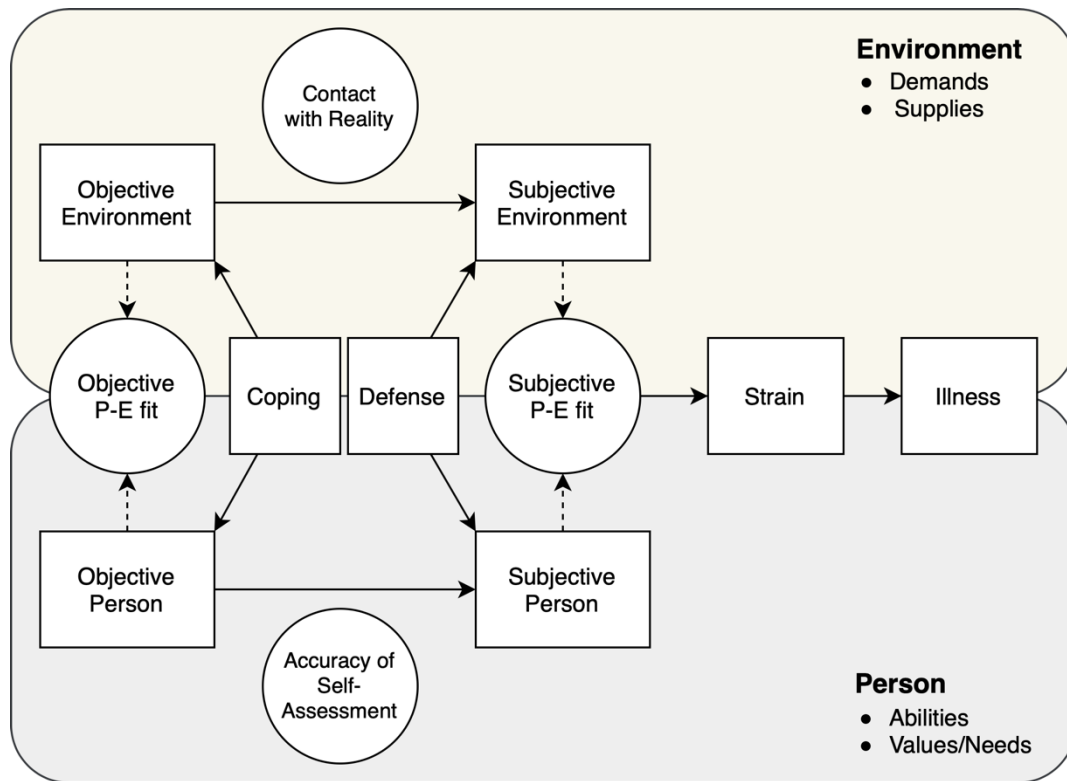


Figure 6: P-E Fit Model According to Caplan (1987, p. 250)

In the theoretical discourse of P-E fit theory, questions arise how the congruence between person and environment can be defined and what can be subsumed under the term environment. Muchinsky and Monahan (1987) have made a two-part distinction on the question of how congruence is to be defined in the interactionist P-E fit theory, which helps to conceptualize congruence. They distinguished congruence between person and environment into supplementary and complementary fit. Supplementary fit shows the degree of congruence between an individual (person) and a group of people (environment). This fit is being shown by how well the individual “supplements, embellishes, or possesses characteristics which are similar to other individuals in this environment” (Muchinsky & Monahan, 1987, p. 269). Variables used to determine congruence include satisfaction, tension, and performance (Muchinsky & Monahan, 1987). This type of congruence is mostly the basis for career decisions (ibid.). Complementary congruence is the fit between the talents of the individual (person) and the existing

needs of the environment, whereby the strengths of the individual complements these needs (*ibid.*). Therefore, this type of congruence is not measured by variables at the individual level, but at the organizational level, and often forms the basis for personnel decisions (*ibid.*). The other question raised, was that what they subsume under the term environment. This is crucial in the theory's application, as it can directly influence the degree of congruence between person and environment. In their meta-analysis, Kristof-Brown, Zimmerman, and Johnson (2005) gave a compact overview of the different types of P-E fit. I will briefly summarize those types below.

The different types of P-E fit theory can be classified on a spectrum ranging from generalist to specific in work and organizational psychology, see figure 7. These five critical domains, ordered from generalist to specific, are person-vocation, person-job, person-organization, person-group, and person-supervisor fit. Person-vocation fit was not covered by the meta-analysis (Kristof-Brown et al., 2005), since this type has already been subjected to extensive reviews and meta-studies (Assouline & Meir, 1987; Spokane, 1985; Tranberg, Slane, & Ekeberg, 1993). The broadest, most general level of P-E fit is the person-vocation fit, the matching of a person's interests with potential career paths (e.g., Holland, 1985). In a more narrow and specific sense, the person-job fit is the match between the characteristics of a person and a job or task to be performed (Kristof-Brown et al., 2005). This includes the conceptualizations D-A vs. S-V fit, which were compared by Edwards (1996). Research on person-organization fit deals with the compatibility between an individual (person) and an organization, i.e., a company. Although there has been a lively discourse in research, all concepts have in common that a congruence between commensurate characteristics of person and organization has been investigated (Kristof-Brown et al., 2005). Again, a narrower focus is given in person-group or person-team fit, which deals with the congruence of person and working group. This line of research is the most emergent (*ibid.*). P-E fit can also be conceptualized as a dyadic relationship. Although many configurations are conceivable (person and colleague or person and recruiter), the most predominant area is person-supervisor fit (*ibid.*). This area seems to be most closely related to the issues in this thesis, as it is primarily concerned with leadership psychology.

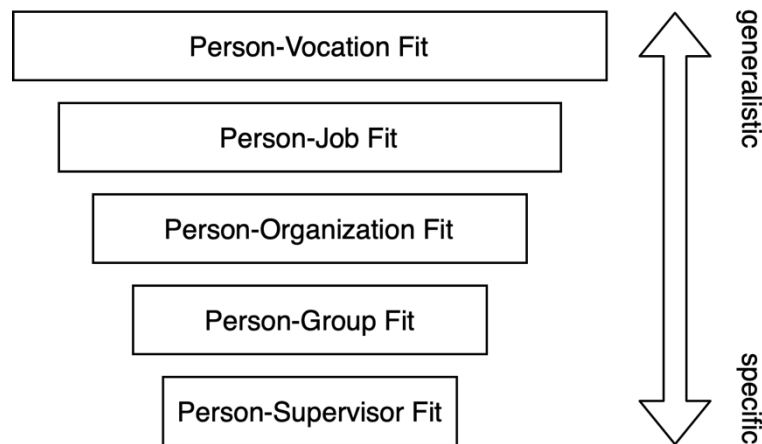


Figure 7: Types of P-E Fit ordered by Specificity of the Environment

The meta-analysis by Kristof-Brown et al. (2005) concluded that the above-mentioned distinctions of P-E fit differ from each other, as there were only moderate correlations between the constructs. These results support the assumption that P-E fit should be understood as a multidimensional concept. In particular, the discriminant validity of person-supervisor fit compared to the other forms of P-E fit (person-job, person-organization, person-group) strengthens the assumption that employees do not regard their supervisor as an “isomorphic representation[] of the organization” (Kristof-Brown et al., 2005, p. 316). The authors concluded that fit plays an important role, with both pre- and post-entry encounters influencing different types of P-E fit (Kristof-Brown et al., 2005). In line with the hypothesis, different aspects of the environment (e.g., job satisfaction) were associated with the corresponding fit type (e.g., person-job fit), which supports the assumption that employees break down their reactions to the respective aspects of the environment (ibid.).

Integration of job demands and job resources into a single model. The job demands-resources (JD-R) model was developed at the beginning of the millennium by Demerouti et al. (2001) to explain the antecedents of burnout (Schaufeli & Taris, 2014). They developed this first version of the JD-R model based on the empirical results of the meta-analysis by Lee and Ashforth (1996), which identified different job demands and job resources as potential drivers of burnout in the

workplace, and on the theoretical considerations of Maslach, Jackson, and Leiter (1996) on burnout (Schaufeli & Taris, 2014).

To outline the basic principles of the model, the two concepts job demands, and job resources are defined below. According to Schaufeli and Bakker (2004), job demands are “physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (i.e., cognitive or emotional) effort and are therefore associated with certain physiological and/or psychological costs” (p. 296). Examples of job demands are physical efforts such as lifting heavy objects, but also psychological aspects such as increased workload, job insecurity, or conflicts at the workplace (Schaufeli & Taris, 2014). While job demands are not entirely negative, they can develop into job stressors as soon as the fulfillment of these demands requires a particularly high level of effort and is therefore associated with high psychological and/or physiological “costs”, which can ultimately lead to negative outcomes such as anxiety, burnout and even depression (Schaufeli & Bakker, 2004). Job resources are defined as “physical, psychological, social, or organizational aspects of the job that either/or (1) [can] reduce job demands and the associated physiological and psychological costs; (2) are functional in achieving work goals; (3) stimulate personal growth, learning and development” (Schaufeli & Bakker, 2004, p. 296). Thus, job resources are not only essential for meeting job demands and performing activities, but are important in themselves and have a fundamental *raison d’être* (Schaufeli & Bakker, 2004). Examples of job resources can be social support or feedback from colleagues or leaders, as well as job control (*ibid.*).

The first version of the JD-R model (Demerouti et al., 2001) proposed two main effects on how job demands and job resources affect burnout along with a moderating effect. Schaufeli and Taris (2014) summarized those processes as follows:

On the one hand, long-term increased job demands, from which employees cannot recover adequately, create permanent activation of the employee, and can thus lead to exhaustion, the health impairing component of burnout. On the other hand, a lack of job resources prevents job demands and personal goals from being achieved, which leads to avoidance behavior (disengagement). This motivational component of burnout is a protective mechanism to avoid further consumption of job resources. Furthermore, in the original version of the JD-R model, it was as-

sumed that job resources have a buffering effect on the negative relationship between job demands and exhaustion, which is in line with the definition of job resources, as it was assumed that they reduce job demands.

The JD-R model (Demerouti et al., 2001) was further developed by Schaufeli and Bakker (2004) into a revised second version. The most fundamental changes in this version compared to the previous version were the addition of another psychological construct, work engagement, and the modelling of burnout and work engagement as mediators between job demands and health problems as well as job resources and turnover intention (Schaufeli & Bakker, 2004). The authors have thus followed the call for a shift towards positive psychology in OHP (Schaufeli, 2004), since the revised version of the JD-R model not only explains negative psychological states such as burnout, but has been given a positive counterpart in the form of work engagement (Schaufeli & Taris, 2014). Work engagement is defined as “a positive, fulfilling, work-related state of mind that is characterized by vigor (that is, high levels of energy and mental resilience while working), dedication (referring to a sense of significance, enthusiasm, and challenge), and absorption (being focused and happily engrossed in one’s work)” (Schaufeli & Taris, 2014, p. 46). As in the first version of the JD-R model (Demerouti et al., 2001), the revised version (Schaufeli & Bakker, 2004) assumed that burnout is a consequence of high job demands and scarce job resources, whereby burnout in this version of the model is not a two-dimensional construct (exhaustion and disengagement), but a unitary construct (Schaufeli & Taris, 2014).

The revised JD-R model assumes two processes, the health impairment process, and the motivational process (Schaufeli & Bakker, 2004). The health impairment process, according to the literature on burnout, assumes that burnout itself has serious consequences for mental and physical health, i.e., it can lead to clinically manifested depression, cardiovascular disease (CVD) and psychosomatic disorders (Melamed, Shirom, Toker, Berliner, & Shapira, 2006; Schaufeli & Taris, 2014). Therefore, it is assumed that burnout acts as a mediator variable between job demands and employee health and well-being, in that excessive job demands are responsible for a gradual depletion of mental resources (ibid.). The motivational process is triggered by abundant job resources, whereby extrinsic and intrinsic motivation can play a role (Schaufeli & Bakker, 2004). According to effort-recovery theory, a work environment that offers a lot of resources increases the

willingness of employees to put effort and their skills into the job task (Meijman & Mulder, 1998). This illustrates the role of the job resource in terms of extrinsic motivation, since the willingness to put compensatory effort into the job task stems from the job resources itself (Schaufeli & Taris, 2014). Thus, job resources help as an instrument for achieving goals. At the same time, job resources are relevant for intrinsic motivation, as job resources nourish the basic psychological needs for autonomy, social relatedness, and competence (e.g., Deci & Ryan, 2000; van den Broeck, Vansteenkiste, & De Witte, 2008). To illustrate this, the following examples are given: Appropriate feedback (job resource) promotes employee learning and thus increases the occupational competence (basic need), whereby decision latitude as well as social support (job resources) equally satisfy the need for autonomy and relatedness (basic needs; Bakker & Demerouti, 2007). In both cases, job resources provide increased motivation, which leads to work engagement, on the one hand by achieving goals (extrinsic motivation) and on the other hand by satisfying basic psychological needs, promoting intrinsic or autonomous motivation (Schaufeli & Taris, 2014). This state of work engagement, in turn promotes positive organizational outcomes, e.g., organizational commitment or performance, therefore work engagement is considered as a mediator between job resources and organizational outcomes (ibid.). All constructs and their relationships to each other, including the health impairment and motivational process described above, are shown in figure 8

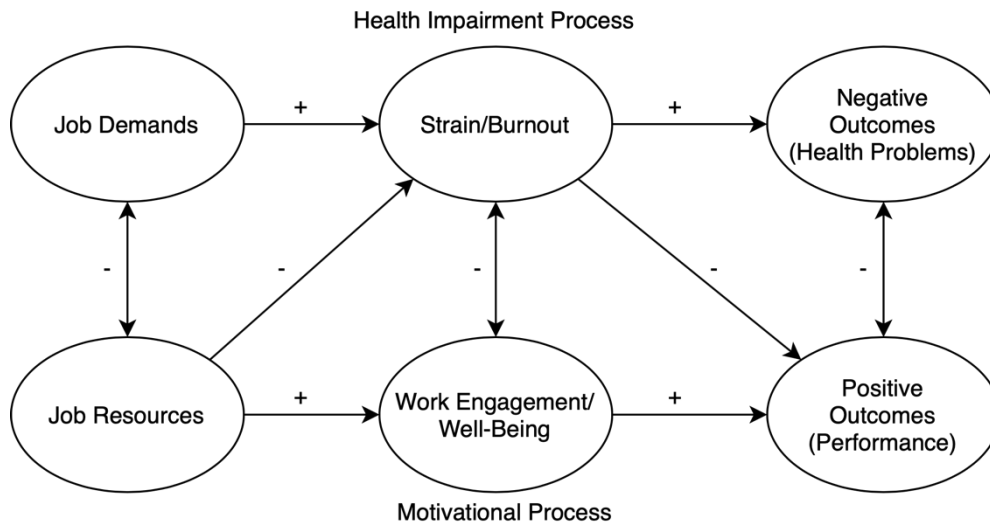


Figure 8: Revised JD-R Model According to Schaufeli and Taris (2014, p. 46)

Schaufeli (2015) has added the feature of leadership to the revised JD-R model. He criticized that leadership was sometimes considered as a job resource in the JD-R model, if at all (Breevaart et al., 2014). In most cases, only certain aspects of leadership, such as social support, coaching, or supervision were included as job resources (Schaufeli, 2015). He also criticized that the studies have modeled all proposed job resources as latent constructs, which makes it difficult to assess their specific impact on the outcome variables. In the case of leadership, however, it is particularly relevant to examine the effects of leadership itself, since leaders should influence the job resources and job demands of their employees in a way that keeps them motivated, productive and healthy (ibid.). Positive leadership styles such as transformational leadership foster a motivating work environment (Piccolo & Colquitt, 2006), which results in increased work engagement of employees (Breevaart et al., 2014). Negative, destructive leadership, on the other hand, promotes the development of role stressors and can therefore also lead to burnout (Skogstad et al., 2007). For these reasons, Schaufeli (2015) advocated the inclusion of leadership as a separate feature in the JD-R model, which is illustrated in figure 9.

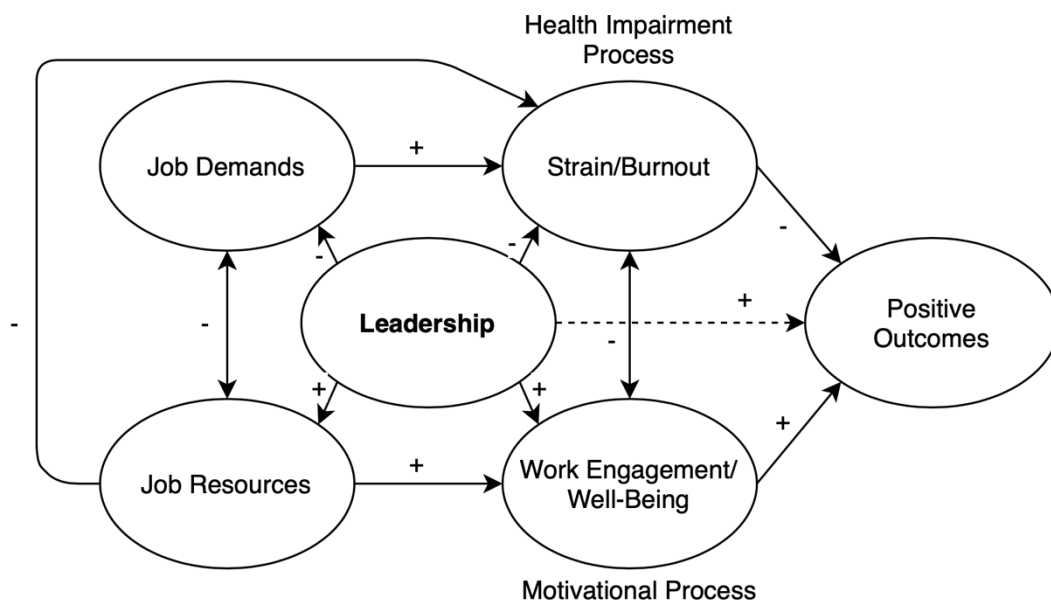


Figure 9: JD-R Model incl. Leadership According to Schaufeli (2015, p. 446)

On stress appraisal and conservation of resources theory. Two other influential theories related to understanding stress in organizations are the transactional theory of stress and coping, also known as stress appraisal theory and Lazarus stress model (Lazarus & Folkman, 1984), and the conservation of resources theory (Hobfoll, Halbesleben, Neveu, & Westman, 2018).

The transactional perspective on stress emphasizes the cognitive processes that occur in individuals to give meaning to their environment, taking into account relational and dynamic aspects that can be stressful (Lazarus & Folkman, 1984). Transactions are bidirectional and imply that stress is not only triggered by the individual or the environment, but rather by transactions between the two (ibid.). The key concept of the transactional theory according to Lazarus and Folkman (1984) can be summarized, based on Biggs, Brough, and Drummond (2017), as follows:

Individuals are constantly in a process of appraising stimuli from their environment. The appraisal process triggers emotions. If stimuli are perceived as potentially excessively challenging, harmful, or threatening, the theory suggests that they should be considered stressors. If a stimulus is perceived as a stressor, this, in turn, triggers coping strategies that either aim to manage emotions, so-

called emotion-focused coping, or address the stressor itself, so-called problem-focused coping. This coping strategy, in which a change in the person-environment relationship is aimed at, can be assessed as favorable, unfavorable, or unsolved concerning the result. A coping that is assessed as solved results in positive emotions. On the other hand, unfavorable or unresolved coping results in distress, which causes the individual to think of other coping choices to tackle the stressor. According to this theory, stress is understood as the appraisal of stimuli from the environment that are assessed as excessively challenging, harmful, or threatening and which at the same time exceed the individual's ability to cope with these stimuli.

The core of the transactional theory of stress and coping covers cognitive appraisal and coping (Lazarus & Folkman, 1984). From this, Hobfoll et al. (2018) derived a primary critique, as the model assumes that whatever is perceived as stressful is stressful (Hobfoll et al., 2018; Lazarus & Folkman, 1984). This narrows the perspective of this theory, as by definition it is necessary to wait for an incident to occur in order to identify it as distressing (Hobfoll et al., 2018). Furthermore, it results in a limitation to individual case descriptions, which renders this theory idiographic, since stress depends on individual cognition (*ibid.*). Even though there have already been further developments of the transactional theory of stress and coping, including future-oriented proactive coping, i.e., anticipating future stressors and planning coping behaviors in advance (Aspinwall & Taylor, 1997; Folkman & Moskowitz, 2004), fundamental differences between COR theory and stress-appraisal theory remain, such as the fact that COR theory emphasizes the objective nature of stressful events (Hobfoll et al., 2018). In the following, the COR theory is described with its basic assumption, principles, and corollaries, following Hobfoll et al.'s (2018) explanation:

The COR theory assumes that individuals strive to preserve, care for, and protect the resources that they value. Examples of resources are family, health and well-being, self-esteem, and purpose in life. Based on this assumption, COR theory postulates that stress occurs when central resources are exposed to a threat, are lost, or cannot be gained even after considerable effort. Resources are not only used to counteract stress but also have the aim of building a reserve for future needs. Maintaining and acquiring resources also gives the feeling that future challenges can be met. This applies to different levels of consideration, e.g.,

individuals, family groups, and entire organizations, since the COR theory follows the critical principle that the individual appraisal is subordinate to the centrally valued resources, which have universal validity. This flanks the criticism of the transactional theory of stress and coping already discussed above. In addition to the basic assumption, the COR theory follows four principles, which are briefly described below (Hobfoll et al., 2018):

The first principle of the COR theory is the understanding that there is an evolutionary bias in cognition that leads to resource loss being overweighted and resource gains being underweighted. The COR theory is the only stress theory that considers the effects of resource gain and loss and its momentum. COR theory assumes that resource losses not only have a greater effect than resource gains but also that the effect, in the case of resource losses, runs at a higher speed and is of longer duration. Thus, resource losses have a more rapid effect on possible impairments. The second principle of the COR theory states that resources must be invested to counteract resource loss or to recover from already occurred losses and to gain resources. This use of resources can be direct (e.g., using savings for loss of income) or indirect (e.g., improving skills to cope with difficult situations at work in the future). The third principle of the COR theory describes that paradoxically, resource gains become more important in the context of resource loss. The fourth principle of the COR theory states that people fall into a defensive mode once their resources are exhausted, which can be accompanied by aggressive and irrational behavior. This principle is also based on evolutionary considerations, which include survival and adaptation strategies. Besides the four principles mentioned above, the COR theory includes three corollaries, which are briefly summarized below (Hobfoll et al., 2018):

The first corollary is that resource possession and resource lack integrate vulnerability and resilience, i.e., greater resource possession is associated with lower susceptibility to resource loss as well as an improved ability to gain resources. The reverse is also true: Individuals or organizations that are lacking resources are more susceptible to losing resources and have greater difficulty in gaining resources. The second corollary is the spiral nature of resource loss. As, each time the stress spiral is circled, fewer resources are available to compensate for resource losses. This downward spiral can also gain momentum and accelerate. The third and last corollary is the logical complement to the second corollary.

This third corollary describes the spiral character of resource gains, which are slower and attenuated compared to the resource loss spiral. Because of this inertia gain cycles take longer to complete. Finally, gain cycles are the only option besides flight, both for individuals and for whole organizations, to gain commitment and performance and to counteract resource loss.

Figure 10 provides a condensed summary of the basic assumption, principles, and corollaries of COR theory described above.

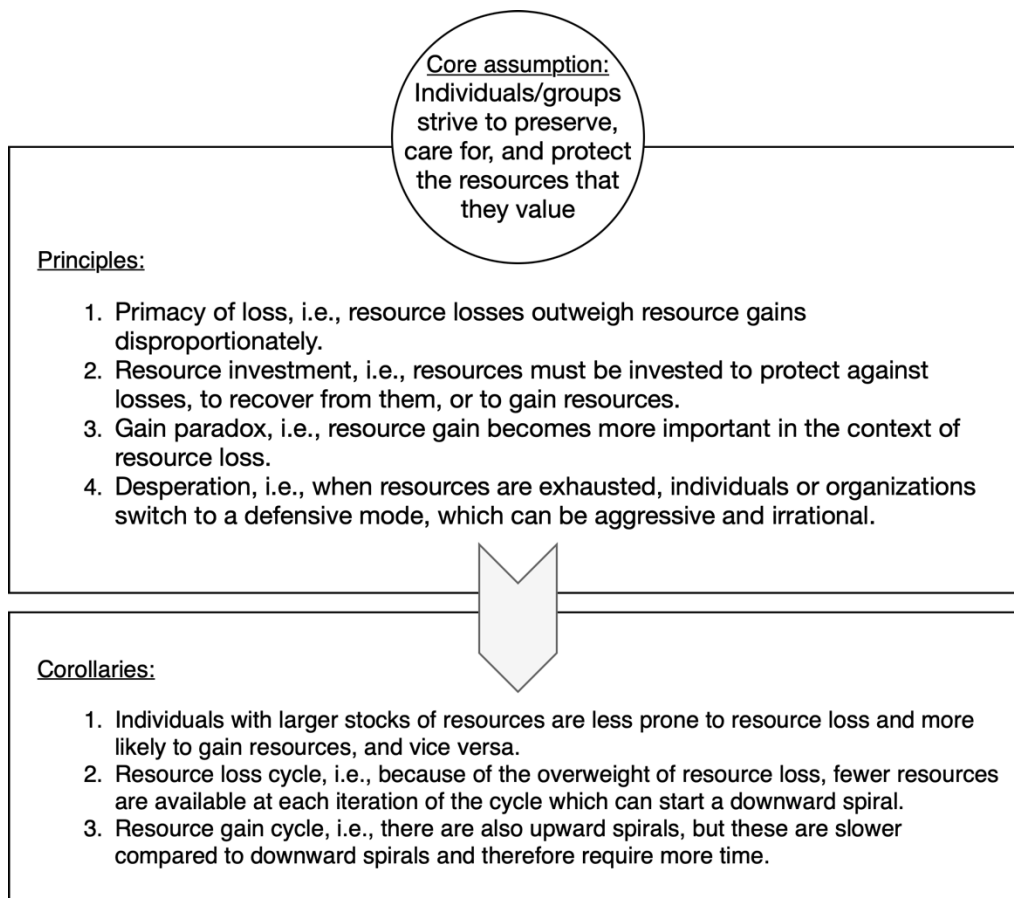


Figure 10: Core Assumption, Principles, and Corollaries of COR Theory According to Hobfoll et al. (2018)

2.1.2.2 *Social Exchange Mechanisms Related to Burnout*

This chapter follows the classification of theories and models in OHP according to Schaufeli (2004). The second category consists of theories that deal with mechanisms of social exchange and the development of burnout. The focus is on the predominant models, namely the effort-reward imbalance model and the social exchange model of burnout.

Balancing effort and reward in an occupational context. The effort-reward imbalance model (Siegrist, 1996), which is presented in the following, is not based on job demands and/or job resources as in the previously introduced models, but on mechanisms of social exchange. The effort-reward imbalance model was developed in the mid-1990s. The model is explained in detail below, following Siegrist (1996):

The assumption underlying the model is that the work role in adult life combines self-regulatory functions, such as self-esteem and self-efficacy, with social incentive structures. This can also be described as occupational status provides recurring opportunities to contribute and perform, to be rewarded and valued, and to belong to a social group. These positive effects of a work role on emotional and motivational self-regulation presuppose a basic principle of social exchange, namely reciprocity. Employees bring in their effort at work, whereupon they receive rewards in a social exchange process. These rewards can be given to employees through three different delivery instruments: money, esteem, and status control. The effort-reward imbalance model proposes that a deficit of reciprocity between cost and gain, i.e., in this case high-effort and low-reward conditions, lead to a state of emotional distress with autonomous arousal and strained reactions. The model is shown in figure 11.

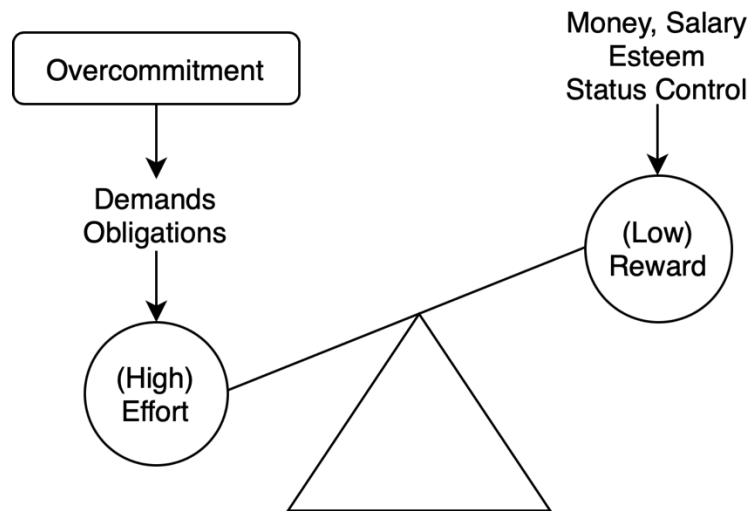


Figure 11: Effort-Reward Imbalance Model According to Siegrist (1996, p. 30)

The construct of status control arose out of Siegrist's (1996) interest in aspects of professional life that threaten self-regulatory processes such as mastery, self-efficacy or esteem, which can trigger recurring negative emotions such as fear or anger. Based on self and identity theories, he suggested that such threats occur when existential social roles, such as the work role for many people, are interrupted or lost. Within these conditions, control over interpersonal rewards is limited, leading to reduced self-esteem and emotional well-being. It is therefore assumed that threats to the continuity of the work role led to persistent stress. With the explication of the construct status control, along with the intuitive variables, money and esteem, all relevant aspects of low reward will be presented. For high effort there are two possible sources, extrinsic and intrinsic. The extrinsic source mainly comprises of job demands and the resulting obligations at the workplace. The intrinsic source describes how an individual (employee) deals with high demands in a high demand situation. In this context Siegrist (1996) introduced the construct of need for control, which he described as follows:

“Need for control specifies those cognitive, emotional, and motivational components within the global concept of Type A behavior that are suspected of triggering enhanced arousal in demanding situations: Individuals who score high on measures of need for control often tend to misjudge (i.e., over-

estimate or underestimate) demanding stimuli in their personal perception” (Siegrist, 1996, p. 29).

For employees with a high degree of need for control, this coping-pattern together with high job demands entails the risk that these employees will incur high costs, i.e., mobilization of energy and involvement in their work role, even if the expected gain is low (Siegrist, 1996). Especially because of such coping strategies, it is important when considering the high effort part of the reciprocity equation to obtain information on the source (extrinsic vs. intrinsic) of the effort (ibid.).

Siegrist (1996) carried out his own investigations in which he was able to find direct evidence for his model. He also compiled findings from other researchers that provide direct and indirect evidence for the effort-reward imbalance model that he developed. Finally, he concluded that high cost/low gain situations in the workplace are a risk factor for cardiovascular health.

A social exchange model of burnout. Similar to the approach of the effort-reward imbalance model (Siegrist, 1996), Schaufeli (2006) has developed the social exchange model of burnout, which offers a theoretical-conceptual framework for the development of burnout in the work context and is based on the fundamental principle of social exchange theories, which emphasize reciprocity, i.e., the balance between give and take. Compared to the effort-reward imbalance model, different levels, interpersonal (between individuals), team and organization, are distinguished. This makes the model generically applicable. In the following paragraphs, I present the model, based on the original work by Schaufeli (2006):

The work builds on two previous publications by Buunk and Schaufeli (1993, 1999). Buunk and Schaufeli (1993) linked burnout with social exchange processes in the care sector. They hypothesized that burnout in the workplace is mainly the result of social and interpersonal interactions in the workplace. To better comprehend the development of burnout at work, they considered how the individual (employee) perceives and interprets the behavior of others, e.g., work colleagues or supervisors. Buunk and Schaufeli (1999) also argued from an evolutionary perspective, explaining that this strong preference for social exchange relationships is ingrown because it has ensured both survival and reproduction in human history. This essential role of interpersonal reciprocal relations, as a cen-

tral factor of human life, affects the physical and mental health of humans (Buunk & Schaufeli, 1999).

Both publications (Buunk & Schaufeli, 1993, 1999) were based on probably the most influential theory of social exchange, the equity theory (Adams, 1965), which assumes that people in social relationships pursue reciprocity, i.e., that their own investments and gains of a relationship should be proportional to those of the other party (cf. Schaufeli, 2006). As soon as people consider these exchange relationships to be unbalanced and unfair, they feel stressed and want to re-establish equality (e.g., Walster, Walster, & Berscheid, 1978), which is also aptly expressed in the following quotation (therefore quoted again here, cf. Schaufeli, 2006): "Since burnout sets in when the effort spend is in inverse proportion to the reward received, it becomes imperative to balance the equation" (Freudenberger & Richelson, 1980, p. 175).

Buunk and Schaufeli (1993) argued primarily from the perspective of COR theory (Hobfoll, 1989), assuming that lack of reciprocity exhausts the emotional resources of an employee, leading to the first dimension of burnout, emotional exhaustion. This can lead to a downward spiral, the so-called "loss spiral", if the individual invests increased effort to stimulate reciprocity (Hobfoll & Shirom, 2000). The emotional exhaustion of the affected employee resulting from this loss spiral can also lead to a depersonalized reaction towards others rather than turning towards them empathically and with genuine interest (Schaufeli, 2006). Depersonalization, as the second dimension of burnout, can thus restore reciprocity by causing the affected person to psychologically withdraw (Buunk & Schaufeli, 1993). This way of coping is dysfunctional, as an emotionless, negative, undifferentiated or highly distanced attitude towards other people arises, which also weakens supportive social relationships and increases failure (Schaufeli, 2006). The third dimension of burnout, the feeling of diminished personal accomplishment, can be the consequence, which is characterized by doubts about one's own work performance and a lack of competence experience (incompetence; *ibid.*).

In addition to the interpersonal level, social exchange can also be applied to other levels. First, research has proposed a two-tiered approach to social exchange in the occupational context, which includes social exchange at the organizational level in addition to the interpersonal level, which has been discussed above (Schaufeli et al., 1996). At organizational level, a lack of reciprocity was explained

by breaching the psychological contract which represents employees' expectations towards the organization, usually assumed to be a proportional relationship between personal investment or effort and organizational outcomes (Rousseau, 1995). The lack of perceived reciprocity at the organizational level resulting from a violated psychological contract not only leads to emotional exhaustion, but can also promote other negative organizational outcomes, such as turnover intention, job dissatisfaction, low organizational commitment, theft, absenteeism, etc. (cf. Schaufeli, 2006). Schaufeli (2006) explained the above-mentioned negative outcomes of a violated psychological contract from the perspective of equity theory with the re-establishment of reciprocity through reactions that may either reduce personal investment (withdrawal at the psychological or behavioral level, such as reduced organizational commitment or turnover) or increase organizational outcomes for an individual (e.g., through theft or intentional absenteeism). Second, a third level, the work team, was integrated into the model of social exchange as an explanatory approach to the development of burnout at work (Taris, Horn, Schaufeli, & Schreurs, 2004). The researchers assumed that members of a team sensing a disparity between their engagement and the work team's results, i.e., reciprocity is no longer given, psychologically withdraw by depersonalizing their team colleagues to restore the balance of give and take (reciprocity).

Schaufeli (2006) brought these three levels, interpersonal, team and organization, together in a model, the social exchange model of burnout. Based on previous research, he assumed that a lack of reciprocity at all levels leads to strains that exhaust the affected people emotionally, which can result in burnout. At the same time, he assumed that, at the respective levels, actions are taken by the affected person to re-establish the balance between give and take. He based this structure of the model and the modelling of the paths on the transactional stress model (Lazarus & Folkman, 1984), in which a distinction is made between strains and coping, whereby in the concrete case strains, such as emotional exhaustion, are generic, i.e., applicable to every exchange relationship regardless of the level, and coping, such as withdrawal, is very closely linked to the respective exchange relationship. This model is shown in figure 12.

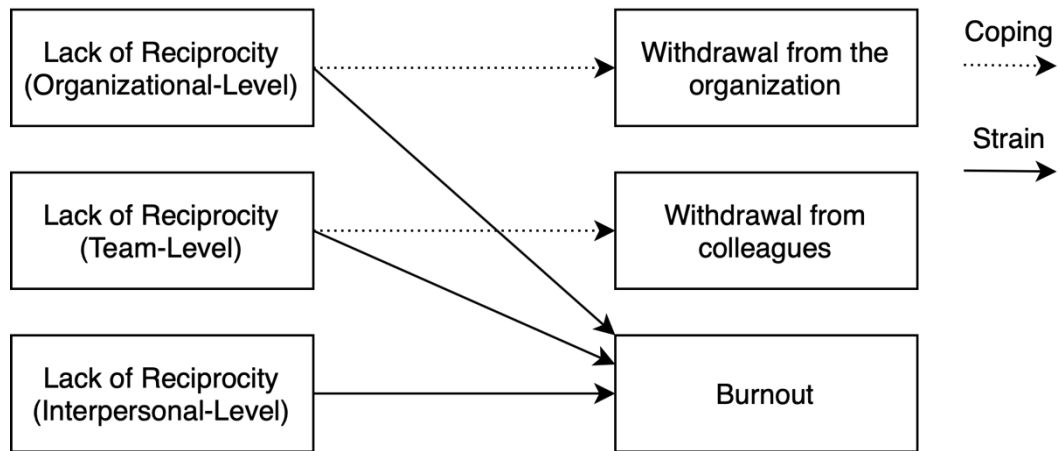


Figure 12: Social Exchange Model of Burnout According to Schaufeli (2006, p. 80)

Schaufeli (2006) used a meta-analysis to investigate whether reciprocity is disrupted in human services, e.g., teachers, media specialists, police officers, etc. He concluded that this is the case and that in particular the balance between give and take on an organizational level, followed by the relationship with the respective service recipient (interpersonal level), is disturbed, so that the professional feels under-benefited in the respective relationship. He furthermore examined whether a lack of reciprocity is positively linked to burnout. The weighted and unweighted correlations from 55 studies showed that all three levels (interpersonal, team, organization) were positively associated with emotional exhaustion. Furthermore, disturbed reciprocity at the interpersonal level also led to the other dimensions of burnout, namely depersonalization and reduced personal accomplishments. Furthermore, a curvilinear relationship between reciprocity and emotional exhaustion was found in some studies. The over-benefited were more strongly associated with emotional exhaustion than the under-benefited, which Schaufeli (2006) considers to be specific to the context of the respective study (health care sector), where the medical helping model predominates.

Overall, Schaufeli (2006) considered his theoretical elaboration that a lack of reciprocity at all levels is associated with distress and withdrawal, with withdrawal being shown specifically at each level of imbalance, supported by empirical research. At the same time, he noted that withdrawal is an inappropriate strategy for restoring balance, since instead of a positive feedback loop, a vicious circle as shown in figure 13 seems to exist: withdrawal compromises relationships, lead-

ing to a further lack of reciprocity, which leads to emotional exhaustion, which in turn leads to increased withdrawal.

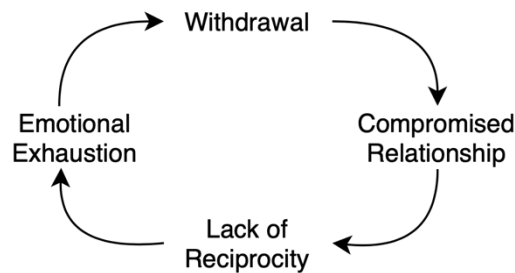


Figure 13: Vicious Circle of Withdrawal According to Schaufeli (2006)

Emotional exhaustion seemed to mediate the relationship between lacking reciprocity and the depersonalization dimension of burnout (Schaufeli, 2006), which is in line with previous research (Leiter, 1993), underlining the multidimensionality of burnout (Maslach et al., 2001), but also highlighting the centrality of emotional exhaustion. In conclusion, Schaufeli (2006) states that a lack of reciprocity is undoubtedly involved in the development of burnout and that the balance between give and take plays an important role in explaining the psychological mechanisms for the development of burnout, but also other negative organizational outcomes. Therefore, he concludes that a perspective of social exchange is a valuable framework for understanding burnout and health-related organizational outcomes.

The perspective of social exchange seems particularly appropriate for this dissertation, since this research already followed the generic definition of leadership according to Yukl (2006), which states that leadership is a process of social influence. The later following definition of servant leadership will reveal that this leadership theory, as a moral approach (Lemoine, Hartnell, & Leroy, 2019), also focuses on the genuine interest of the leader in the needs of the employees.

2.1.2.3 *Motivational Processes as Precursors of Well-Being*

This section follows the general classification of theories in the field of OHP by Schaufeli (2004). The third and last category are theories that focus on motivational processes. The focus is on predominant motivation theories that are partic-

ularly suitable for explaining well-being at work, namely self-determination theory and theory of purposeful work behavior.

Self-determination theory in OHP. Self-determination theory (SDT; Ryan & Deci, 2000a) has been used to investigate the effects of different independent variables on motivation, but also on health-related outcomes. Van den Broeck et al. (2008) dedicated an entire chapter to SDT within the scope of the OHP. The authors divided the chapter into four areas that are of central importance for SDT, and the below paragraphs will be based on the following structure: (1) meta-theoretical foundations and assumptions, (2) qualitative differentiation of behavior regulation (the “why” of behavior), (3) qualitative differentiation of goal orientation (the “what” of behavior), and (4) the conceptualization of basic psychological needs and their satisfaction (van den Broeck et al., 2008):

Based on the seminal work of Ryan and Deci (2000a), van den Broeck et al. (2008) described the meta-theoretical assumptions of SDT at the beginning of their chapter as follows: SDT as an organismic-dialectical meta-theory, assumes that humans are growth-oriented organisms that actively interact with the environment in which they are situated. More precisely, SDT assumes that humans have an inherent striving to realize their inherent potentials. This can be, for example, the desire to broaden one’s knowledge and personal experience, the search for challenges or the urge to explore the world. These new experiences gained should be authentically and harmoniously unified into their selves. Gaining new experiences goes together with the natural propensity to socially connect with other people and to feel related. Hence, the striving for self-development and the striving for an authentic and harmonious integration into the social environment are both highly important. Understanding humans as an active organism striving for self-realization and social involvement is not self-evident and does not happen automatically, rather SDT assumes that this growth-oriented nature of humans needs basic nutrients. This can only come to fruition if the individual has abundant resources to fuel those tendencies, or if the individual gets sufficient support from its environment. If the social context is not supportive, the individual’s growth tendencies may be halted. From this, SDT not only explains how the positive side of optimal functioning of individuals can be spurred, but also how the negative malfunctioning side can be caused. The assumptions presented suggest

that by promoting their inherent potentials, people can be motivated optimally. This has a positive effect on performance and well-being. The SDT recognized people might become passive and counterproductive. In an environment that confronts individuals with excessive demand, over-control, or rejection, individuals' weaknesses will come to the fore and dysfunctional behavior will be shown.

After the explanation of the meta-theoretical assumptions, following the chapter of van den Broeck et al. (2008), a qualitative differentiation of behavioral regulation is presented, also referred to as the "why" of behavior: First, a short description of how the concept of motivation is understood in the SDT compared to other theories (e.g., Vroom, 1964) will be given. While historical motivation theories assumed that extrinsic and intrinsic motivation are basically additive, i.e., both motivations would have to be added up to tap the full potential of an individual's motivation, SDT has a fine-grained understanding of the functional interaction of extrinsic and intrinsic motivation. Research in SDT suggested that there is an influence of extrinsic on intrinsic motivation, e.g., so that a financial incentive in an intrinsically motivated task spoils the pleasure of the task. However, a closer look revealed that not all extrinsic motivational stimuli have a negative effect on an individual's intrinsic motivation. Compared to other motivation theories, which are primarily limited to the strength of motivation (quantity), SDT classifies the quality of motivation. The quality of motivation describes the degree of internalization and integration of the reason for an extrinsic motivation, i.e., the extent a person has made the rationale for an action their own. The quality of motivation was divided into four types by Ryan and Connell (1989), which were classified by Ryan and Deci (2000a) on a continuum between low to complete personal endorsement.

According to van den Broeck et al. (2008), the four extrinsic motivations are summarized in the following: The first type, external regulation, explains the commitment to an activity with the incentive to receive a reward, fulfill an expectation or avoid punishment. The impetus for practicing a certain behavior is completely external to the individual, and the external pressure can be both material and social. A well-known example of externally regulated people in the work context are employees who work hard to gain recognition from their supervisor and/or receive a bonus. Introjection, which is the second type of extrinsic motivation, assumes that human behavior is guided by pressing reasons from within,

i.e., participation in certain activities is a way to avoid feelings of shame or guilt and/or to experience feelings such as pride. In introjection, people reward or punish themselves internally for a certain behavior, which already illustrates the difference to external regulation: in part, contingencies for the introjected behavior became internalized. To continue the previous example, it could be assumed that people work hard and work overtime to get recognition from their supervisor (external regulation) or work hard and long hours to avoid feelings of guilt (introjection). The locus of causality, which is perceived by the person, is external in both external regulation and introjection. This makes it likely that people feel pressured to perform a certain behavior because there has been little or no internalization of motivations, so both have been grouped under the category of controlled motivation. In contrast, the remaining two types of extrinsic motivation, identified and integrated regulation, are characterized by an internal locus of causality perceived by the individual. This means that in these extrinsic motivation types, individuals perceive the behavior as belonging to them since they are identified with the reason for showing a certain behavior. Identified regulation is always referred to when the goal of the behavior is favored and perceived as significant. Integrated regulation requires complete internalization beyond identification, i.e., a person would in this case only perform an action if it fits in with their own values and beliefs. Identified regulated behavior is not always in full alignment with the person's own values and beliefs, as the following example shows: a person may engage in a profession because they value their work and consider it meaningful (identified regulation), or because they believe that the activity itself, e.g., being a nurse, is fully consistent with their values, e.g., helping other people is leading to a state of integrated regulation. Both in identified and integrated regulation, the behavior shown, and its cause is accepted by the individual and is thus internalized. Therefore, SDT assumes that this behavior is performed with a feeling of volition, which is why these types of motivation are said to be autonomous (compared to regulated).

Compared to the latter extrinsic motivation types, intrinsically motivated behavior is richest in autonomy because people are naturally guided by their interests (Ryan & Deci, 2000a). In SDT, extrinsic motivation is not considered negative if the reason for a particular behavior has been internalized, so that the person is autonomously motivated (van den Broeck et al., 2008). It is also important

to note that the extrinsic motivation types are not consecutive stages, but that behavior can be integrated or internalized to varying degrees at any given time (Gagné & Deci, 2005). Therefore, in SDT, the distinction between extrinsic and intrinsic motivation has been shifted more towards a continuum between controlled and autonomous motivation (Sheldon, Turban, Brown, Barrick, & Judge, 2003). The SDT claims that an autonomous regulatory style has positive effects on well-being and performance compared to a controlled regulatory style (Ryan & Deci, 2000a). In the work context, studies have shown that autonomous regulation was positively associated with variables such as life and job satisfaction, efficacy in the work context and mental health and negatively associated with outcomes such as emotional exhaustion, a dimension of burnout (Fernet et al., 2004; Judge, Bono, Erez, & Locke, 2005). Autonomous compared to controlled regulation was also considered as an individual's resource, which allows one to influence the environment, so, e.g., autonomously motivated humans utilize job control (Karasek, 1979) to compensate for the detrimental effects of too high job demands (Fernet et al., 2004). The four different qualitative types of extrinsic motivation and intrinsic motivation, as the most autonomous form of motivation, are shown in figure 14.

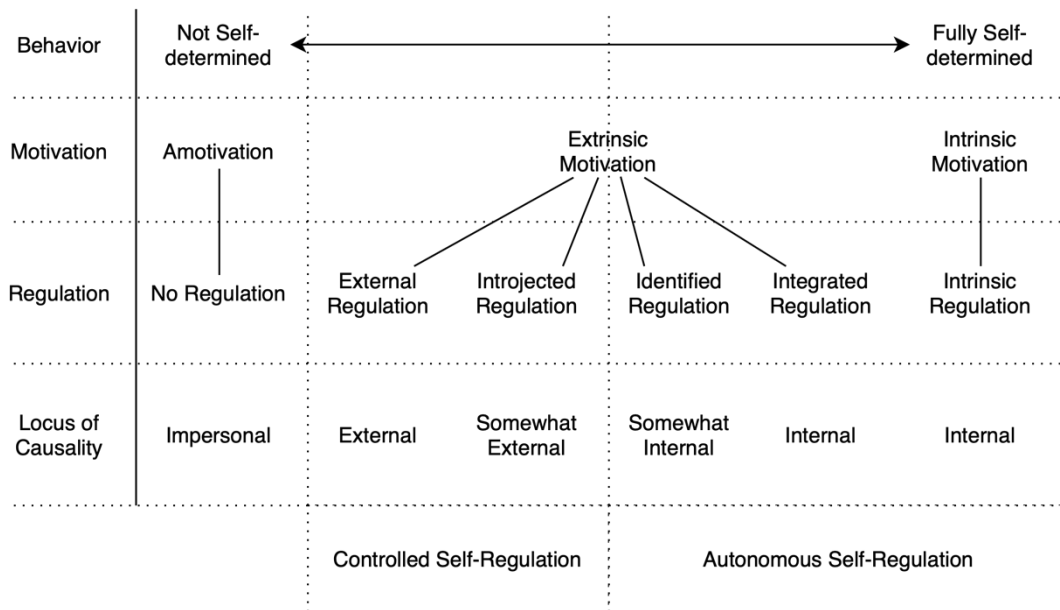


Figure 14: Continuum of Motivation in SDT According to Ryan and Deci (2000a, p. 72)

Besides the interplay between controlled and autonomous motivation, which has been conceptualized as the “why” of behavior, the content of goals (the “what” of behavior) is also considered important for the optimal functioning of people (Ryan & Deci, 2000a; van den Broeck et al., 2008). The very widespread and frequently applied goal setting theory according to Locke and Latham (2002) makes no distinction in the quality of goals. SDT, on the other hand, also emphasizes the inherent focus of the respective goals (Ryan & Deci, 2000a). Intrinsic goals can be defined as a theoretical expression of individuals’ growth orientation and encourage the respective individual to utilize their immanent potentials, such as self-development, affiliation or contributing to society (van den Broeck et al., 2008). In contrast, extrinsic goals are outwardly directed, i.e., individuals with an extrinsic goal orientation strive for external cues that represent worth, such as physical attractiveness or wealth, and may put their intrinsic interests aside to appeal to or impress others (ibid.). Striving for extrinsic goals thus risks distracting individuals from their innate growth orientation and may therefore come at the detriment of the individual’s well-being and performance (ibid.). Results of an empirical study also indicate that extrinsic work value orientation, compared to

intrinsic work value orientation, reduced outcomes such as job satisfaction, dedication and vitality at work, and increased outcomes such as emotional exhaustion and turnover intentions (Vansteenkiste et al., 2007). Nevertheless, the striving for extrinsic goals could be appealing because their attainment promises short-lived satisfaction, but these hedonistic feelings of happiness and contentment quickly attrit due to their short-lived nature, and goals must be set again, which can result in a hedonistic treadmill (Diener, Lucas, & Scollon, 2006; Vansteenkiste et al., 2007). The striving for and achievement of intrinsic goals, on the other hand, goes hand in hand with deeper and longer lasting psychological well-being in a eudaemonic sense (Vansteenkiste et al., 2007). From this, van den Broeck et al. (2008) summarized that the content of goals, in the sense of Ryan and Deci (2000a), is also important, whereby especially intrinsic goals seemed to be advantageous for optimal human functioning compared to extrinsic goals.

Besides the “what” and “why” of behavior, with the basic psychological needs a theoretical concept has been developed which focuses on the underlying psychological processes (Ryan & Deci, 2000a). Based on the chapter by van den Broeck et al. (2008), the basic psychological needs and their development are described below:

In psychology, the idea of needs has a long tradition (for an overview see Latham & Pinder, 2005), e.g., Maslow (1943) already posited the innate needs for social recognition and self-actualization, although empirical studies lacked evidence for this theory (Porter, Lawler, & Hackman, 1975). Another example are Murray’s (1938) socialized needs for affiliation, achievement, and power. With the strengthening of cognitive psychology, however, attention to needs ebbed away as, from then on, the focus on internal psychological processes such as self-efficacy, expectations or attributions were increasingly considered important for understanding motivational processes (Reeve, 2005). In SDT, though, it is considered that regulatory style as well as goal-directed behavior may not be entirely understood without also considering the underlying process stimulating and driving behavior, namely, satisfying basic psychological needs (Deci & Ryan, 2000; van den Broeck et al., 2008):

These basic psychological needs within SDT are thought to be nutrients that each person needs to be provided with in order to continue to flourish and retain optimal health and integrity. SDT posits that satisfying basic psychological needs

is vital to psychological functioning, just as fulfilling physical needs is necessary for survival, such as the provision of food and shelter. SDT distinguishes between the innate needs for autonomy, belonging (also referred to as relatedness) and competence, which are described in more detail below. In explicating the three basic psychological needs, I continue to follow the chapter by van den Broeck et al. (2008):

“The need for autonomy is defined as an inherent desire to act with a sense of choice and volition, that is, to be the author of one’s actions and to feel psychologically free” (van den Broeck et al., 2008, p. 13). Here the need for autonomy differs from other conceptualizations of autonomy in psychology, which primarily refer to independence or discretion, to a very fundamental degree, which can be showed with the following example: When tasks are delegated to employees, they may experience little or no discretion in deciding which tasks to perform. However, if the task itself is perceived as appealing, useful, or engaging, the person performing the task will most likely perform the task with feelings of both freedom and willpower (Ryan & Deci, 2006). This example illustrates that experiencing autonomy in terms of SDT is not associated with independent action, but can be perceived once employees accomplish the task delegated by their leaders under these circumstances (van den Broeck et al., 2008).

“The need for belongingness is conceptualised as the inherent propensity to feel connected to others, that is, to be a member of a group, to love and care and be loved and cared for” (van den Broeck et al., 2008, p. 14). The basic need for belonging is fulfilled when an individual is able to cultivate relationships, which are perceived as intimate and close, or experiences a sense of communion. For example, once people in the work context experience themselves as being an integral part of their team, they feel capable of talking about personal concerns, joys, and sorrows. Those people are more successful in satisfying their need for belonging than those who feel left alone and do not get any social support (van den Broeck et al., 2008). In the further course of this thesis, the need for belonging is also referred to as need for relatedness.

Finally, the need for competence, a concept found in some models of cognitive psychology (Bandura, 1977a; Vroom, 1964), is also unquestioned (van den Broeck et al., 2008). It represents the need to feel able to master tasks and achieve intended results (Deci & Ryan, 2000; White, 1959). The satisfaction of this need is

accompanied by the development of the capacity to adjust to complex, shifting contexts and to expand one's mental and physical abilities (van den Broeck et al., 2008).

According to Sheldon and Niemiec (2006), in contrast to other need concepts (e.g., Maslow, 1943; McClelland, 1965), needs in SDT are not hierarchically ordered, but all are equally important in promoting growth and well-being. The extent to which an individual expresses a need is not considered, but the extent to which the individual can meet basic psychological needs (Deci & Ryan, 2000). Many studies have demonstrated that satisfaction of basic psychological needs, even in an occupational context across different cultures, sectors and professional levels (Deci et al., 2001), was associated with positive health-related variables such as reduced depression and anxiety and increased job satisfaction (cf. van den Broeck et al., 2008). It was even concluded that optimal functioning at work depends more on the satisfaction of basic psychological needs than on salary and occupational status, since one study showed that the satisfaction of basic psychological needs accounted for more variance in health-related variables than status and salary (Ilardi, Leone, Kasser, & Ryan, 1993). With regard to the satisfaction of basic psychological needs (autonomy, belonging, competence), it can be concluded that these act as fuel or an energetic source for optimal functioning of employees at the workplace (van den Broeck et al., 2008). Autonomous regulation and intrinsic goals (vs. controlled regulation and extrinsic goals) are fostered by satisfied basic needs (ibid.). In order to have motivated and healthy employees, employers are recommended to place great value on autonomous regulation and intrinsic goals of their employees and to provide for the satisfaction of their basic psychological needs, which can be achieved by job design as well as leadership behavior (ibid.).

Leadership is not only seen as important in OHP but is also generally regarded as a critical factor for the success of organizations, not least because the motivation and associated variables (e.g., well-being) of employees are influenced by leadership (Kaiser, Hogan, & Craig, 2008). Experimental studies in the 1990s have already shown that an autonomy supporting leadership style, which (1) provides employees with a meaningful rationale, (2) recognizes the individual feelings of employees and (3) allows employees to take decisions, promotes a self-determined environment and ultimately results in integrated regulation, i.e., au-

onomous motivation (Deci, Eghrari, Patrick, & Leone, 1994). Leadership behavior that supports autonomy has various positive organizational outcomes (cf. van den Broeck et al., 2008) and ensures increased acceptance by employees even during organizational changes (Gagne, Koestner, & Zuckerman, 2000). As expected and in accordance with the hypothesis, it could be shown that a controlling leadership style has negative effects on the motivation of the employees, since the control exercised strongly interferes with the behavior, feelings and thoughts of the employees (Richer & Vallerand, 1995). The researchers were able to show that autonomy-promoting leaders fostered the needs for autonomy and competence, in contrast to controlling leaders who obstructed these needs (ibid.). The already broad empirical evidence for supportive leadership approaches was further substantiated by using a structural equation model to show that the positive relationship between autonomy-supportive leadership practice and employee well-being was mediated by the satisfaction of the three basic psychological needs (Baard, Deci, & Ryan, 2004).

Theory of purposeful work behavior. This theory, besides SDT, provides a further comprehensive framework for linking motivational processes and mental health in the workplace. This is primarily because TPWB, compared to other motivation theories, has integrated the construct of meaningfulness, which is undeniably linked to different facets of mental health (Arnold, Turner, Barling, Kelloway, & McKee, 2007; Britt, Adler, & Bartone, 2001; Compton, 2000; Crego, Yela, Gómez-Martínez, & Karim, 2019; McGregor & Little, 1998; Pines, 2004). For this reason, TPWB, along with SDT, is presented as a prevalent theory of OHP, even if it has played only a minor role in the research so far. I see great potential in this theory to explain outcome variables in the spectrum of OHP, but also to derive other phenomena, such as antecedents of certain leadership theories, with the help of other components of the theory. In the following, I present the basic ideas and major components of the theory, following Barrick et al. (2013):

Barrick et al. (2013) aimed to integrate findings of meta-analytical results on the relationship between motivated behavior and personality (Barrick, Stewart, & Piotrowski, 2002; Judge & Ilies, 2002) and motivation related to job design models, which included both task-related and social characteristics (Humphrey, Nahrgang, & Morgeson, 2007), into a novel theoretical framework. The result is

the TPWB, which provides an integrated understanding of the influence of individual differences and job design on work-related motivation (Barrick et al., 2013). At the core of this theory is the assumption that personality traits trigger purposeful goal strivings, and if these motivational strivings are congruent to the motivational forces of job characteristics, individuals experience a sense of meaningfulness in their actions, which triggers motivational processes. As inferred from the core of the theory, the relationships between personality traits (Big Five), job characteristics (task and social characteristics), and higher-order implicit goals (motivational strivings/fundamental goals) must be described to understand the theory.

Barrick et al. (2013) argued that the 5-factor model of personality reflects the current consensus in science on a taxonomy that reflects stable individual differences in the personality of individuals (see also Barrick & Mount, 1991; Costa & McCrae, 1992). These five dimensions are openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (also known as emotional stability). Questions which, in view of Barrick et al. (2013), have so far remained open are how and when personality affects motivation. For this reason, they introduced the higher-order implicit goals that result from personality. These higher-order implicit goals are understood as psychological processes that control behavior, emotions, and thoughts. Striving to express one's natural personality causes individuals to bring in additional resources, such as attention, activity, and emotional connection, to pursue higher-order implicit goals. In a goal hierarchy, higher-order goals reflect those goals that focus on the "why", i.e., the purpose. People are often subconsciously drawn to these goals, as the goals are implicit. Research by DeShon and Gillespie (2005) and Dijksterhuis and Aarts (2010) has shown that people are not aware of these higher-order goals. Barrick et al. (2013) derived four high-order implicit goals based on different motivation theories. From Maslow to McClelland (1971) and Gagné and Deci (2005), these theories reach back over 70 years to the present. Even though further motivational strivings have been conceptualized in literature besides the four motivational strivings that follow, Barrick et al. (2013) are convinced that their four higher-order implicit goals are both universally applicable and compactly structured: First, there is the striving for communion, which implies the motivation of individuals to engage in meaningful encounters and have good relationships with others. Second, indi-

viduals may have the desire to gain influence and power over others, which is called status striving. Third, individuals may strive for personal growth, which includes understanding and controlling the work environment, which is referred to as autonomy striving. The fourth striving is the motivation to show competence and performance, which is termed achievement striving. All four motivational strivings or higher-order implicit goals are closely related to personality. In addition, Barrick et al. (2013) added job characteristics to their theory to account for the promoting or limiting effect of such boundary conditions on motivational strivings and the resulting perceived meaningfulness. Based on the work of Hackman and Oldham (1975), they selected two major components, namely, task characteristics and the social context (for details refer to Humphrey et al., 2007). These include task significance and task identity, i.e., that the results of a task have a substantial influence on others and that a task can be worked on from start to finish. Furthermore, skill variety is important, i.e., the possibility to use different skills for different tasks. Moreover, autonomy and feedback on one's performance, are considered. Additionally, social interactions and interpersonal relationships inside and outside the organization, are integrated in the sense of social context. Table 3 summarizes the motivational strivings, the associated personality traits, and the corresponding congruent job characteristics:

Table 3: Motivational Strivings, Job Characteristics, and Big Five Dimensions According to Barrick et al. (2013, p. 140)

Higher-order implicit goal	Job characteristic (task/social)	Big Five dimension(s)
Striving for communion	Social support, interdependence, interactions outside the organization	Emotional stability, agreeableness
Striving for status	Influence/power, task significance, feedback from others	Extraversion
Striving for autonomy	Task variety, autonomy	Openness to experience, extraversion
Striving for achievement	Task identity, feedback from job/others	Conscientiousness, emotional stability

Barrick et al. (2013) have also designed a diagram that illustrates the relationships between personality traits, higher-order implicit goals, job characteristics, experienced meaningfulness and the resulting (motivational) processes, which is shown in figure 15.

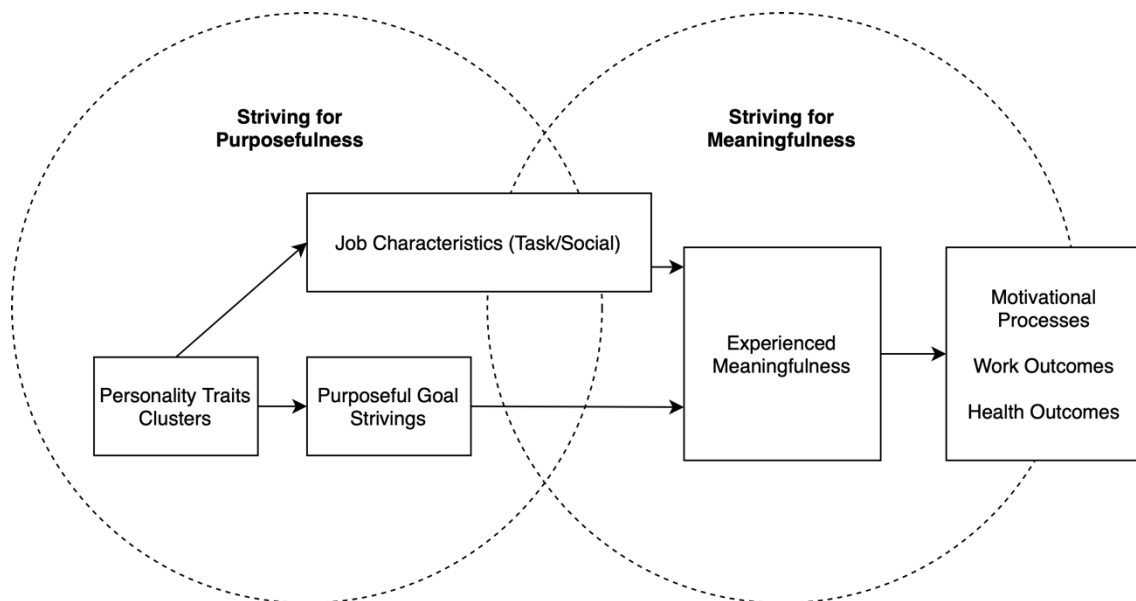


Figure 15: Overview of the Key Concepts of TPWB According to Barrick et al. (2013, p. 134)

2.1.3 Concluding Remarks

Models were presented which can be divided into three distinct classes: First, models that focus on job demands and job resources. Second, models that use social exchange processes as an explanatory model for health at work and third, two comprehensive motivation theories were presented, which also provide explanatory approaches to health psychological issues, e.g., how leadership can influence mental health at work, which is the subject of this thesis. While some theories are more specific, e.g., role stress model, which is limited to stressors from the work role, other theories are rather general, e.g., the JD-R model, P-E fit theory, social exchange model of burnout, COR theory, TPWB, or SDT can be very well and broadly applied to questions from OHP. In particular, the more

general theories seem to be equally well suited for questions of leadership research. In the JD-R model, leadership can be introduced, e.g., as a variable in its own right (Schaufeli, 2015) or a certain leadership behavior can be introduced as a job resource or job demand. P-E fit theory already offers suitable conceptualizations with person-supervisor fit, where the individual fit of employee and leader is important. The social exchange model of burnout is also suitable for the analysis of stress and burnout in the leadership context on different levels (employee and leader), because besides the social exchange theory, the COR theory is also applied, which has already been used in several empirical studies on the health of leaders (e.g., Byrne et al., 2014; Lin, Ma, & Johnson, 2016). SDT, with the concept of basic psychological needs, offers a rich opportunity for application to the question of how leadership can affect the health of individuals (Baard et al., 2004). The concept of basic psychological needs has already been applied to a research question on servant leadership (Chiniara & Bentein, 2016). The TPWB also has its *raison d'être* for the questions of this thesis: for example, this theory could not only help to answer questions on antecedents of servant leadership, but also on psychological processes between servant leadership and mental health.

Each of the empirical studies to be carried out in the context of this thesis will have a separate chapter on hypothesis development, in which one or more hypotheses will be derived from one or more theories and/or models in a way that fits the research question posed. In these chapters, I will use the theories and models explained here and apply them to the specific research question.

2.2 INTRODUCTION TO LEADERSHIP PSYCHOLOGY

2.2.1 History and Definition

A brief history of leadership theories. With no doubt, leadership is one of the most complex and various phenomena in organizational psychology research (Van Seters & Field, 1990). Although the term leader was first mentioned in the 1300s, the concept of leadership did not take shape until the late 1700s, and the scientific discussion of leadership did not begin until the 20th century (cf. Van Seters & Field, 1990). Bennis (1959) made the following apt statement about the emerging field of leadership research:

“Of all the hazy and confounding areas in social psychology, leadership theory undoubtedly contends for the top nomination. And, ironically, probably more has been written and less known about leadership than about any other topic in the behavioural sciences” (p. 259).

He also remarked that the concept of leadership eludes one in a certain way or reappears in another form to mock one again with its complexity and slipperiness (Bennis, 1959).

To counteract this slipperiness, several papers have been published which have been devoted to the historical foundations of leadership theory and have developed different taxonomies to classify the development of the different era of leadership research (Antonakis, Cianciolo, & Sternberg, 2004; Horner, 1997; House & Aditya, 1997; Landis, Hill, & Harvey, 2014; Van Seters & Field, 1990; Yammarino, 2013). If one compares the different taxonomies and order structures, it is noticeable that there is no single correct approach and thus no consensus. Therefore, it is important to emphasize that it is not the goal of this thesis to compare different historical analyses of leadership psychology. Still, I consider it important to show where the tradition of leadership psychology originated and where it stands today. For this reason, I follow the chapter of Antonakis et al. (2004)(Antonakis et al., 2004), as they have already taken into account results from earlier publications (Bass, 1990; House & Aditya, 1997; Van Seters & Field, 1990) and also give their professional judgment on the structure of leadership research. The following presentation does not describe each leadership theory in detail but gives a historical overview of different schools of leadership research. At this point, I would like to mention in advance, that individual theories that have prevailed up to the present day will be described in more detail later. In the following, I describe the eight schools of leadership research in the below paragraphs, based on the work of Antonakis et al. (2004):

The earliest school of leadership research dealt with leaders’ traits. It was assumed that outstanding individuals shaped our history. The so-called “great man” theory was postulated and has been scientifically investigated since the beginning of the 20th century (Borgatta, Bales, & Couch, 1954). This theory assumed that certain dispositional characteristics, such as personality, distinguish leaders from non-leaders. Therefore, from then on, attempts were made to identify stable characteristics that were related to leadership. In reviews, for example,

they could associate the traits dominance and intelligence with leadership (Mann, 1959; Stogdill, 1948). Because many leadership researchers were rather critical about the results, the trait school experienced a crisis and was almost shut down. This school experienced a renaissance after nearly 30 years after Mann's (1959) data was reanalyzed and a strong relationship between intelligence and leadership became clear (Lord, Foti, & De Vader, 1984). Other works published at a similar time also contributed to the revival of the trait school (Kenny & Zaccaro, 1983; Zaccaro, Foti, & Kenny, 1991). Motivational aspects were introduced into trait research (Deluga, 1998; House, Spangler, & Woycke, 1990; McClelland, 1985; McClelland & Boyatzis, 1982; Schmitt & Winter, 1998). Even if "great man" is a bygone era, it can be stated that traits, among other factors, play a role in the emergence and effectiveness of leadership. The resurgent interest is reflected in the publication output of the trait school (Lowe & Gardner, 2000). For an in-depth discussion of the renaissance of the trait school, refer to the work of Antonakis, Day, and Schyns (2012).

Due to the crisis of the trait school in the 1950s, a movement followed which addressed behavioral aspects of leadership. Even though there had been early publications focusing on behavior (Lewin & Lippitt, 1938), the commonly known studies of the Universities of Michigan (Katz, Maccoby, Gurin, & Floor, 1951) and Ohio (Stogdill & Coons, 1957) marked the starting point of the behavioral school. Researchers at these two universities identified two dimensions of leadership; on the one hand, consideration, i.e., employee orientation, and on the other initiating structure, i.e., an orientation towards structures, processes, and production. Researchers applied these results to later models, such as the managerial grid which is a grid with two axes representing task orientation and employee orientation. However, because of contradictory findings, this school also maneuvered into a crisis, which led to a focus on leadership contingencies in the 1960s. Even though the research interest in behavioral approaches has ebbed to date (Lowe & Gardner, 2000), it remains to be noted that the basic ideas and findings were integrated into transactional leadership and contingency theories.

Another theoretical stream that emerged in the late 1960s is the contingency school of leadership. The foundation of this school goes back to Fiedler (1964). He explained in his theory that, besides the leader-follower relationship and the positional power of the leader, the task structure also determines the effectiveness of

the leadership style exercised. The path-goal theory (House, 1971) is considered one of the best-known contingency theories. Kerr and Jermier (1978) and the substitutes for leadership theory formed an independent line of research that was devoted to the question of the conditions under which leadership becomes obsolete. These conditions include, among other factors, clear organizational systems and procedures and employees' skills. Although work on contingency theories continued (e.g., House, 1996), criticism increased (Schriesheim & Neider, 1996), and research interest decreased (Lowe & Gardner, 2000), possibly also because contextual approaches emerged from these theories.

A few years after the emergence of the contingency school of leadership, there was a movement in leadership research that focused on relational aspects of leadership. The relational school of leadership has its origins in the vertical dyad linkage theory (Dansereau, Graen, & Haga, 1975). Over the years, this theory has been successively developed into the now well-known leader-member-exchange (LMX) theory, which deals with the nature and quality of relationships between leaders and employees (Graen & Uhl-Bien, 1995). The LMX theory assumes that high-quality relationships lead to more positive outcomes compared to low-quality relationships. According to the theory, high-quality relationships are based on mutual respect and trust, whereas low-quality relationships are primarily based on contractual obligations between leader and employee. This branch of research seems to be of moderate interest and has delivered productive output (Lowe & Gardner, 2000).

In the 1970s and 1980s, leadership research was confronted with a further crisis, since on the one hand the validity of questionnaire-based scales was questioned against the background of implicit leadership theories (Eden & Leviatan, 1975; Rush, Thomas, & Lord, 1977), and on the other hand, the question was raised whether leadership plays a role regarding company results (Meindl & Ehrlich, 1987; Meindl, Ehrlich, & Dukerich, 1985; Pfeffer, 1977). The criticism ranged from ratings of leadership distorted by implicit cognitive perceptions of individuals, to the assumption that ratings of leadership by employees are attributions that employees used to explain company-related outcomes, to whether leadership exists and is needed to lead a company to success (e.g., Lord, Binning, Rush, & Thomas, 1978; Meindl & Ehrlich, 1987; Meindl et al., 1985; Pfeffer, 1977). This criticism has been largely mitigated or refuted (e.g., Day & Lord, 1988; Smith,

Carson, & Alexander, 1984; Waldman & Yammarino, 1999; Weber, Camerer, Rottenstreich, & Knez, 2001; Howard M. Weiss & Adler, 1981), whereas this critical scientific discourse has helped push leadership research through leadership skeptics. Thus, leadership research could benefit on various levels and, for example, set stricter methodological standards, distinguish between top-level leadership and supervisory leadership, or direct a stronger focus on the perception of reality by followers as stakeholders. Although not all open questions posed by leadership skeptics have been answered, this skeptical-critical school is largely inactive (Lowe & Gardner, 2000).

Because of the crisis, a stronger follower-centered perspective on information-processing was developed (Lord & Maher, 2002). Lord et al. (1984) laid the foundation for the information-processing school of leadership. In their article, they created an understanding of why a leader is legitimized because their inherent characteristics match with the prototypical characteristics expected by employees (Lord et al., 1984). Furthermore, cognitive approaches in leadership were used to better understand how cognition and behavior are related (Wofford, Goodwin, & Whittington, 1998). Links were further established to other areas of leadership, such as how prototypes relate to contextual factors (Lord, Brown, Harvey, & Hall, 2001; Lord & Emrich, 2000).

In the mid-1980s, when leadership research threatened to slip into another crisis, Bass (1985) laid the cornerstone for visionary, charismatic leadership theory, which is summarized under the term new leadership school. Not only Bass but also his colleagues and other researchers focused on these “new-genre” leadership theories (e.g., Avolio, Waldman, & Yammarino, 1991; Conger & Kanungo, 1994, 1998; Hater & Bass, 1988; Sashkin, 1988). Based on previous research (Burns, 1978; House, 1977), Bass (1985) argued that previous paradigms relied primarily on transactional aspects of leadership and that a novel form of leadership was essential to meet future needs. He postulated that this is the best way to achieve the optimal outcomes for the organization and its followers. This was the birth of transformational leadership, which, through leaders’ visionary, charismatic, and thus inspiring behavior, induces employees to work for the common good and to grow beyond their perceived limits. Transactional and transformational leadership were later combined in the full range of leadership model (FRL; Bass & Riggio, 2006). Besides the FRL model, theories emerged that are not based on cha-

risma but on moral concepts, such as ethical, authentic, and servant leadership (Lemoine et al., 2019). These leadership theories have a different core, but in my opinion, they also belong to the new-genre leadership theories (Avolio, Walumbwa, & Weber, 2009). New-genre leadership theories are of great interest in leadership research (Lowe & Gardner, 2000). They represent the positive side of leadership, although in the last decade there has also been increased research on the dark, destructive side of leadership (Schyns & Schilling, 2013; Yammarino, 2013). I am convinced that these new-genre theories, the FRL model, moral approaches to leadership, and destructive leadership are the currently predominant leadership theories in research. Therefore, I will present these prevalent theories in more detail later in this thesis.

Besides the brief historical outline of various schools of leadership research, it is important to define the concept of leadership. For this purpose, it is important to first differentiate between the term's leader and manager. Subsequently, a definition of leadership, in the sense of this thesis, will be worked out.

On the difference between leaders and managers. Since the terms "leader" and "manager" are often used interchangeably, it is important to clarify how these terms are to be understood in this thesis. The first definition of what distinguishes leaders from managers was provided by Zaleznik (2004), originally published in 1977, which at its core was as follows: Managers are very process-oriented and follow clear, almost bureaucratic rules and use the formal structures of a company to influence and control the employees. As a result, employee satisfaction and behavior are primarily based on material contingent rewards. According to Zaleznik (2004), this rather passive-reactive style does not go hand in hand with the creativity of the manager and their need to form emotional bonds with the employees. Leaders, on the other hand, speak to their employees on an emotional level by sketching creative and vibrant images as well as visions for the employee's future. With their emotional involvement and charisma, they are a beacon and inspiration for employees and can even transform their attitudes and values. As a result, leaders develop their employees at both a cognitive and emotional level. By incorporating moral beliefs into their visions, employees identify with their leader and may even tend to idealize them.

In this thesis the leader and not the manager is defined as the object of research, since the technocratic-administrative image of a manager fits better into the classical tasks of the administration of a company, such as planning, steering, and controlling, but not into the modern leadership of people in the sense of a dyadic social exchange relationship. Moreover, the leader, rather than the manager, appears to be able to have an influence on the mental health of employees. In principle, this influence can be positive or negative, depending on the leadership behavior of the leader.

Towards a definition of leadership for this thesis. To investigate the effects of leadership on followers' and leaders' mental health in the course of this dissertation, a more detailed discussion of the concept of leadership is required. One of the biggest challenges is the considerable variety in the concept of leadership. As Stogdill (1974) noted, there are virtually as many leadership definitions as there are researchers who have sought to define it. The aim of this work is not to define leadership comprehensively, considering the historical development, but to explore a specific leadership style in terms of its potential and risks regarding OHP. For this reason, the following section describes what characterizes the phenomenon of leadership as precisely as possible in the context of this thesis.

The definition according to Yukl (2006) seems particularly useful for this purpose and will be described in the following: Leadership influences people, who are synonymously called employees, followers or subordinates, in two completely different ways. On the one hand, leadership has an indirect influence on the employees through the design of the organization, e.g., the definition of guidelines, the provision of machines and systems which are to support the work process, and the configuration of the working environment. On the other hand, leadership directly influences employees. Here, leadership is understood as a process of social influence based on personal interaction, usually through communication. In principle, this social influence is not limited to the relationship between employee and leader but can be applied by everyone in the group. This phenomenon is called shared leadership (Pearce & Sims, 2000) and describes influences that go beyond the vertical-dyadic relationship between leader and employee. As a result, firstly, there is formalized leadership in the form of a leadership role, which is seen as a specialized non-shared function, and secondly, there

is non-formal leadership that results from social interaction processes. Not only may persons with a leadership role exert direct and indirect influence on employees, but also employees themselves may exert indirect influence on other employees.

For this reason, Yukl (2006) has also defined various levels at which leadership in organizations can be analyzed. Considering the organization as the largest and the individual as the smallest entity, the following levels were introduced, sorted from large to small. First, leadership of organizational processes, i.e., theories on how an organization can be strategically managed. Second, leadership in group processes, i.e., theories on how leadership can positively influence the effectiveness in teams. Third, leadership as a dyadic process between employee and leader, i.e., theories and models that regard leadership as a process of mutual influence between leader and employee. Fourth, leadership as an intra-individual process, i.e., theories on why someone is motivated to become a leader. These four levels of analysis are illustrated in figure 16 below.

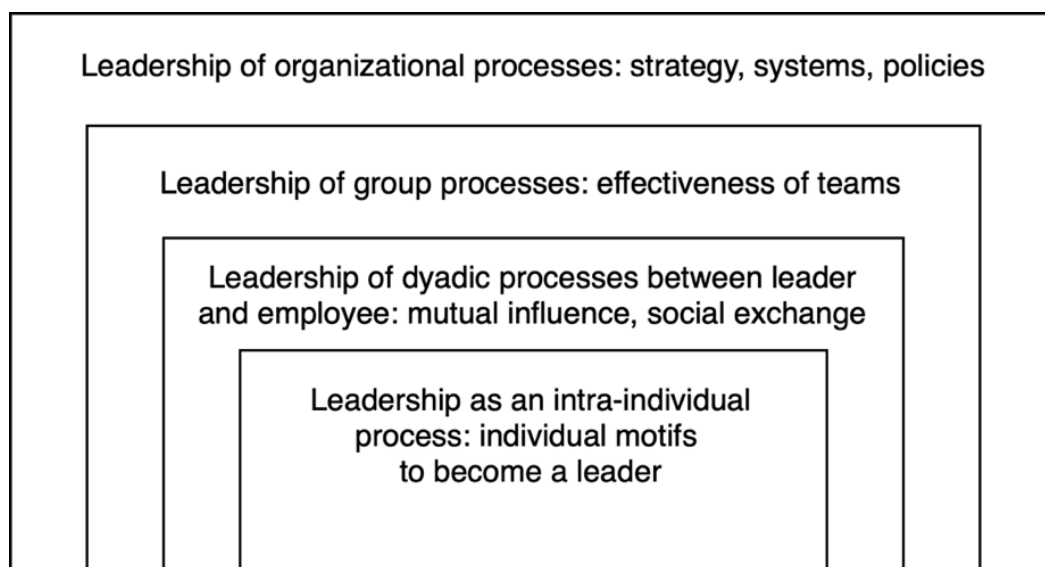


Figure 16: Levels of Analysis for Leadership Research According to Yukl (2006, p. 15)

There is no question that leadership, as a process of direct influence, has an impact on mental health, as defined by OHP. For example, the healthy organization model has been able to show that work characteristics have had a positive

influence on employees' work adjustment, e.g., job satisfaction and organizational commitment, and have ultimately improved the health and well-being of employees (Wilson, Dejoy, Vandenberg, Richardson, & Mcgrath, 2004). Sonnentag and Frese (2003) provide further insights into the topic of stress in organizations and the influence work design can have on it.

To achieve the goals of this thesis, it is necessary to define leadership as social influence through interaction between a leader, in their formal leadership role, and an employee. In agreement with Kelloway and Barling (2010), I do not deny the existence of social influence outside the formal leadership role, but I assumed that persons with formal leadership roles have a particularly large influence on OHP outcomes. It is even assumed that the relationship between employee and formal leader is one of the most important in the work context when it comes to the individual health of the employee (Kelloway & Barling, 2010). Leadership is thus understood as a dyadic social process; at the same time, it should be acknowledged that leadership behavior is not independent of moderating and mediating variables (Yukl, 2006).

From this understanding of leadership in the context of OHP, the generic research design is derived: Leadership behavior or perceived leadership behavior is related to one or more outcome variables, in this case two measures of mental health and illness, whereby this relationship can be mediated by a third set of variables, e.g., employee motivation. Furthermore, potential environmental variables can exert an amplifying or neutralizing influence on the assumed relationship between independent and dependent variables. In this context, it is important to emphasize that leadership behavior not only affects the employees, but also has an impact on the leader personally (e.g., Barling & Cloutier, 2017), particularly relevant for the second study of this thesis.

2.2.2 Prevalent Theories

As already described in the historical outline of leadership theories, I will limit the presentation of prevailing theories to new-genre leadership theories. Besides the FRL model (Bass & Riggio, 2006), the most studied theories are moral approaches to leadership (Lemoine et al., 2019) and destructive leadership behavior (Schyns & Schilling, 2013). Furthermore, I will organize these prevalent theo-

ries into two categories according to the nature of the behavior (Yammarino, 2013). First, there is the “bright”, positive side of leadership behavior, which subsumes constructive leadership theories. Second, there is the “dark”, negative side of leadership behavior, which consolidates destructive leadership behavior. All the leadership theories presented in the following have been intensively researched, also regarding consequences for variables from the spectrum of OHP, such as leaders’ and employees’ mental health.

2.2.2.1 *Full Range of Leadership Model*

The instrumental set of transactional leadership, which includes contingent reward, MBE-active, MBE-passive, and laissez-faire leadership, as well as transformational leadership with the four I’s, idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, and the augmenting effect, which integrates both models, were combined in the FRL model. This model goes back to the work of Bass (1985). He linked aspects of the two-factorial leadership model, including initiating structure and consideration, which go back to early studies of the 1950s at Ohio State University (for a meta-analysis see Judge, Piccolo, & Ilies, 2004; Ralph M. Stogdill, 1950), with the ideas of transformational-transactional leadership theory (Burns, 1978).

One of the basic assumptions of the FRL model is that each leader displays all dimensions of the model (4 I’s, contingent reward, MBE-active, MBE-passive, laissez-faire) to some extent (Bass & Riggio, 2006). An optimal combination of the different dimensions would be if the leader shows most transformational (4 I’s) and least laissez-faire leadership behavior. A non-optimal combination of the dimensions is consequently given if the frequencies are exactly the other way around, so transformational leadership is rarely performed, and laissez-faire leadership is most often manifested.

To better understand the structure of the model and underlying integrated theories, transactional, transformational, and instrumental leadership are presented below.

Transactional leadership. Exchange processes, hereinafter termed transactions, are assumed to be fundamental in the study of leadership (Waldman, Bass, &

Yammarino, 1990). This is mainly due to the fact that the expectancy theories of motivation, which were transferred to the organizational context by Georgopoulos, Mahoney, and Jones (1957) and mathematically formalized by Vroom (1964), were also applied to the leadership context (House, 1971). The developed path-goal theory of leadership (Evans, 1974; House, 1971) is primarily based on the so-called path-goal hypothesis: "If a worker sees high productivity as a path leading to the attainment of one or more of his personal goals, he will tend to be a high producer. Conversely, if he sees low productivity as a path to the achievement of his goals, he will tend to be a low producer" (Georgopoulos et al., 1957, p. 346). The first aspect (high productivity) was generally considered to be more likely for a society, as it is questionable how many people see a way to achieve their goals in low productivity (Georgopoulos et al., 1957).

In transactional leadership, leaders instrumentalize the performance-outcome expectancy of their employees in order to motivate them to the intended work behavior (Waldman et al., 1990). In order to strengthen the confidence in the effort-outcome expectancy, the leader has to establish a structure (initiating structure) in which tasks are clearly defined, expectations of employees are clarified, procedures are defined, and deadlines are set (House, 1971). As a result, employees know exactly what efforts are required to meet the expectations of their role (Waldman et al., 1990). Transactional leadership thus makes use of directive behavior, in line with path-goal theory, by using both initiating structure and contingent rewards (*ibid.*). The instruments of transactional leadership include the following (Bass, 1990):

- Contingent Reward: Recognition of achievements, contractual exchange of rewards for efforts, awarding of rewards for particularly good performance.
- Management by Exception (active; MBE-active): Leaders actively monitor their employees and look for violations of rules and standards and intervene when necessary.
- Management by Exception (passive; MBE-passive): The leader only acts if predefined standards have not been met ex-post, i.e., no active monitoring.
- Laissez-faire: Leaders avoid decisions and generally show a passive-avoidance attitude.

Besides Hunt and Schuler (1976), Podsakoff, Todor, and Skov (1982) empirically investigated four possible leadership behaviors of transactional leadership. More specifically, they analyzed the following possible behaviors in terms of their impact on employee performance (Podsakoff et al., 1982): Behavior can be rewarded in two ways, firstly contingent, i.e., according to the performance shown, or secondly non-contingent, i.e., independent of the performance shown. The same applies to punishments that can either be contingent on the behavior or performance shown or independent of it, i.e., non-contingent. This leads to four possible behaviors, namely contingent reward, non-contingent reward, contingent punishment and non-contingent punishment. The study results revealed the following (Podsakoff et al., 1982): In line with previous research on contingent reward in isolation, it was shown that contingent reward was positively linked to employee performance. For non-contingent reward, no significant main effect could be shown, but a moderation where high performers were less satisfied with leaders and co-workers when non-contingent reward was offered. Furthermore, contingent punishment and non-contingent punishment were not significantly associated with employee performance, but non-contingent punishment was negatively linked to employee satisfaction.

In summary, transactional leadership refers to an exchange relationship between leader and employee, which serves the superior purpose of satisfying one's self-interests, i.e., leaders expect performance from their employees by encouraging them by means of contingent rewards (Bass, 1999).

Transformational leadership. Burns (1978) introduced the theory of transformational leadership, understanding transactional and transformational leadership as two ends of the same continuum. Rather than focusing on his own immediate interests and those of their employees, the transformational leader was brought in to create greater awareness and interest in a group or organization, to build trust and gradually lead employees from livelihood to performance orientation and growth (Waldman et al., 1990). But Bass (1985) did not agree with Burns' assumption that transactional and transformational leadership are two poles of the same continuum. On the contrary, he considered both approaches to be different concepts which, in the best case, can even be used simultaneously by a leader. Bass (1985) also developed typical behavioral characteristics of a transfor-

mational leader as well as a breakdown into different dimensions. The original concept has been further refined over the years and currently includes the following four dimensions, also known as the four I's of transformational leadership (e.g., Avolio, Waldman, & Yammarino, 1991; Bass, 1999):

- Idealized influence (this dimension is also referred to as charisma)
- Inspirational motivation
- Intellectual stimulation
- Individualized consideration

Following Avolio et al. (1991) the dimension of *idealized influence* is described as follows: The leader treats others with respect and strengthens the trust of the employees in the mission being promoted. Thus, transformational leaders are in a position of power. Once employees observe that their leader can achieve the desired outcomes, it is likely that employees will tend to imitate their leaders, i.e., to conform to their attitudes, values, and behavior. From this, employees can deduce that they can achieve goals which they previously thought were unattainable. Of course, this is only possible when the leader succeeds in activating the full potential of their employees. By imitating the leader, the employees' ability to take responsibility for themselves and to lead themselves is strengthened. This idealized influence is accompanied by a strong emotional bond between employee and leader. At the same time, the employee identifies strongly with their leader, whom they perceive as charismatic and try to imitate.

The dimension *inspirational motivation* was described as follows (Avolio et al., 1991): The potential to inspire others was primarily seen in the charisma of the leader. Other antecedents were also considered to be the leader's previous personal performance, good communication skills and eloquence, and the role modelling and learning experiences of other inspiring leaders. Furthermore, inspirational motivation is fueled by a vision and a catchy, easy-to-understand mission statement on how the group or organization should develop. Additional methods of building trust and generating interest include demonstrating hard work by the leader, an optimistic outlook for the future even in times of crisis, creative approaches to reducing workloads on employees, and giving stimulating, inspirational talks. At the same time, the other two dimensions of transformational leadership, individualized consideration, and intellectual stimulation, also play a role in the development of inspirational motivation.

The third dimension, *intellectual stimulation*, was described by Avolio et al. (1991) as follows: A transformational leader should show their employees ways and reasons how, not only technical problems, but also interpersonal issues or even the own attitudes and values, which have been formed in the course of life, can be seen in a different light. It is therefore the responsibility of the transformational leader to stimulate employees to think about old problems in new ways. This is primarily a matter of relying on logical argumentation and evidence to solve problems, rather than relying on non-evident opinions. Especially in the case of complex and difficult work-related problems or decision making, a bidirectional, i.e., mutual, stimulation process can be beneficial. Here, it is not only the leader who stimulates their employees, but also vice versa. The transformational leader is thus open to the ideas and argumentations of their employees and is in turn stimulated by them. This bottom-up direction appears particularly helpful if the leader has a limited amount of experience and incomplete information on a work problem. It was also emphasized that in an academic workforce, it can be helpful for maintaining motivation if the leader allows this form of mutual intellectual stimulation, as especially educated employees may expect it. Through intellectual stimulation and the associated critical examination of a problem, employees develop their own problem-solving skills.

The last dimension of transformational leadership, *individualized consideration*, was summarized as follows (Avolio et al., 1991): As the term itself suggests, transformational leaders pay attention to the needs of the individual employee rather than treating all employees as if they had the same needs. How can transformational leaders achieve this? Transformational leaders listen to their employees while building a good personal relationship with each employee. Therefore, Avolio et al. (1991) also compared this dimension of transformational leadership to the role of a mentor who takes time for their mentees, to learn about their strengths and weaknesses and to develop self-confidence and the skills of their mentees. Individual consideration in the work context can also be shown by transformational leaders acting as advocates for their employees. For example, the leaders not only make sure that needed help with problems, but also that resources are provided to achieve the employees' goals. Leaders place a protective hand over their employees to prevent them from inappropriate workloads. In this way, transformational leaders want to remove unnecessary obstacles to ensure

good personal development and optimal performance of their employees. For leaders who are higher up in the hierarchy, such as a division manager or Chief Executive Officer (CEO), the individualized consideration can also take on a more symbolic character. An example could be a CEO who tries to remember names of individual employees to be able to personalize his or her encounters with employees in case a conversation occurs. The basic assumption of individualized consideration is that every employee must be understood as an individual with personal needs. Since needs can change over time, transformational leaders must be able to identify and understand the needs of each employee, as they change, to develop the full potential of their employees.

Following the original assumption of Bass (1985) that transactional and transformational leadership are different concepts which are not mutually exclusive in the behavioral spectrum of a leader, I would like to refer to the work of Waldman et al. (1990): Based, inter alia, on the work of Bass, Avolio, and Goodheim (1987), the researchers put forward the hypothesis that the charisma of a leader, which is operationalized in idealized influence in the construct of transformational leadership, increases the effectiveness of leadership beyond contingent rewards. In this context, effectiveness is understood as the extent to which a leader's organizational unit fulfills its responsibilities and contributes to the mission of the company by ensuring that all the leader's employees cooperate. The leader provides structure by clarifying work roles and responsibilities. At the same time, contingent rewards ensure that employees' self-interests are satisfied, ensuring a certain level of commitment to the shared mission. In addition, a leader with transformational behavior can increase the effectiveness of the employees by creating an emotional tie to the employees. In turn, employees are more likely to identify with their leader. These stimuli will inspire employees to achieve more than what would be achievable through contingent rewards alone. Therefore, Waldman et al. (1990) propose contingent rewards as a "contractual" basis, augmented by charismatic or transformational elements to motivate employees to increase their efforts and performance. The researchers referred to this as the *augmenting effect*. In the empirical part of their study, they were able to show that charisma explains variance beyond contingent rewards in relation to leader effectiveness.

Contrary to the assumption that implies a strengthening or enhancement of transactional leadership, one article argued that transformational leadership explains unique variance over and above transactional leadership, but not vice versa (Bycio, Hackett, & Allen, 1995). Although Bass (1998) suggested that there are good theoretical reasons for transformational leaders to use transactional leadership, it is conceivable that the positive effects of transactional leadership are merely a byproduct of transformational leadership and do not explain unique variance in the outcome variables (Judge & Piccolo, 2004). In their meta-analysis, Judge and Piccolo (2004) therefore put the augmentation hypothesis to the test and could show in various analyses that there is both criterion-related and incremental validity for the different leadership styles. The positive effect of transformational leadership outperformed the effect of transactional and laissez-faire leadership (*ibid.*). However, it is worth mentioning when controlling for laissez-faire and transactional leadership, it significantly reduced the effect of transformational leadership (*ibid.*).

Instrumental leadership (IL) as an add-on to the FRL model. The approach to integrate instrumental leadership as an aspect into the existing FRL model was developed by Antonakis and House (2014). Although they acknowledged that it is not straightforward to complement an already complex model, they made it clear that a comprehensive view of leadership is necessary to do justice to the complex phenomenon of leadership and its multidimensionality. Their core reason for developing a more complete FRL model was the fact that, in addition to transactional and transformational components, aspects of work facilitation and strategic leadership were missing. Judge et al. (2004) already advocated a stronger consideration of initiating structure, thus supporting their assumption that instrumental parts are missing in the model and in the measuring instruments, such as the multifactor leadership questionnaire (MLQ). According to Antonakis and House (2014), up to the time of their analysis there had been no research that had developed scales derived from theories that measure aspects of strategic leadership and work facilitation. Antonakis and House (2014) “define IL as the application of leader expert knowledge on monitoring of the environment and of performance, and the implementation of strategic and tactical solutions” (p. 749). According to

this definition, they grouped the factors of instrumental leadership as follows (Antonakis & House, 2014):

- Strategic leadership
 - Environmental monitoring
 - Strategy formulation and implementation
- Follower work facilitation
 - Path-goal facilitation
 - Outcome monitoring

They categorized all four factors under the same class of leadership behavior, since they are at the core to be reduced to monitoring and solution implementation, which were equally classified in functional leadership theories (Antonakis & House, 2014). Furthermore, they explained that the factors of instrumental leadership, i.e., strategic leadership and follower work facilitation, are complementary to each other, just as the whole construct of instrumental leadership is seen as a complement to the FRL model. In a short summary they outlined the extended, more comprehensive FRL model as follows (Antonakis & House, 2014):

Continuous monitoring of the corporate environment helps leaders to discover potential fields of action (environmental monitoring). At the same time, leaders need to know the capabilities of the organization in which they operate to know which fields of action can be developed. As a result, leaders develop appropriate strategies and break them down into clear, specific goals to make the strategy more tangible and accessible to employees (strategy formulation). Employees' commitment to the goals and corporate strategy is achieved by means of a moral and emotional way of leadership (transformational leadership). In addition, leaders must provide resources for their employees to enable them to carry out the tasks identified by the leader (path-goal facilitation). In this respect, it is of great importance to monitor the performance of the employees and provide valuable feedback (outcome monitoring). In this instrumental activity, however, the leader pays attention to the individual needs of the respective employee and tries to stimulate them intellectually and provide inspiration. In addition, extrinsic motivational stimuli are necessary, which can be given as rewards or admonishment in line with the performance shown (transactional leadership).

In order to validate their model complemented by instrumental leadership and the newly developed scale for measuring instrumental leadership, Antonakis

and House (2014) conducted six studies, two of which were pilot studies: The first two studies involved a total of 226 participants and took place in an experimental setting. Both studies served to identify the factors of instrumental leadership and to examine the extent to which instrumental leadership is a prototype for good leadership. Whereas only students participated in the first study, the second study was conducted with a working population. In the third study ($n = 374$), the researchers examined the discriminant and convergent validity of the instrumental leadership scale and the FRL model to the two-factor leadership model (initiating structure and consideration). They further tested whether the strategic factors from the instrumental leadership scale are better predictive of a leader's hierarchical rank than the other factors. The fourth study included 418 leaders and 3164 evaluators from different contexts, i.e., different companies and countries. The aim of the last study was to test the previously identified factors of instrumental leadership on a larger sample and to compare them with the factors of MLQ, i.e., to demonstrate incremental validity of the instrumental leadership construct.

2.2.2.2 *Moral Approaches to Leadership*

Some leadership theories go beyond the concepts of the FRL and the FRL extended by instrumental leadership. Since the 2000s, leadership theories emphasizing moral norms in leadership have gained acceptance. For example, much theoretical foundations have been built on authentic leadership (Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Walumbwa et al., 2008), ethical leadership (Brown & Treviño, 2006; Brown, Treviño, & Harrison, 2005) and servant leadership (Liden et al., 2008; Sendjaya & Sarros, 2002; van Dierendonck, 2011). As they have emerged, questions have also arisen regarding conceptual overlap, theoretical maturity, and psychometric measurement. With the integrative review by Lemoine et al. (2019) they answered many of the emerging questions. In their comprehensive work they came to the following conclusion (Lemoine et al., 2019):

They are confident about the validity of the different moral approaches to leadership because the theoretical foundations underlying authentic, ethical and servant leadership are broadly underpinned by empirical research. If the various leadership theories are considered from a moral-philosophical perspective, the morality of a leader can guide their leadership behavior and its effectiveness in different ways. Bearing in mind that leadership is a process of social influence

from the leader to the employees, which is used to achieve collective goals; moral leadership forms define what these collective goals can be and how they can best be achieved. A leader who is dedicated to the maximum common good of everyone and who is committed to contributing to the common good can inspire employees, based on a reciprocity approach (servant leadership, following consequentialism). Employees can also be encouraged by a leader who stands for compliance with standards and rules and who themselves contribute to the clarity and security of these same standards and rules to meet the requirements of an ordered society (ethical leadership, following deontology). Employees can be stimulated by a leader who is committed to moral freedom and the responsibility that goes with it, and who will be part of the system, knowing that they will be backed in the development of moral autonomy (authentic leadership, following virtue ethics). Common in these approaches is that the moral concepts lived by the leader must have the implicit agreement with the expectations of the employees. This is a central challenge of moral leadership approaches, so both leaders and employees must be careful to value alternative approaches to morality.

In addition, the concept that servant leadership is not a completely independent leadership model, but that there is an augmentation effect comparable to the FRL model arose (Grisaffe, Vanmeter, & Chonko, 2016): In their hierarchical conceptualization they follow the idea that there is a large overlap between servant leadership and other leadership styles, such as transformational leadership. If a leader only has a prevalence in the overlapping dimensions like empowering employees, it alone does not make them servant leaders. Therefore, following Grisaffe et al. (2016), they assumed that someone who shows “servant leadership”-specific behavior can also show transformational leadership behavior, but not vice versa. The key distinctions that make up servant leadership behavior are serving first and selflessly caring for the needs of others. The concept developed by Grisaffe et al. (2016) is shown in figure 17.

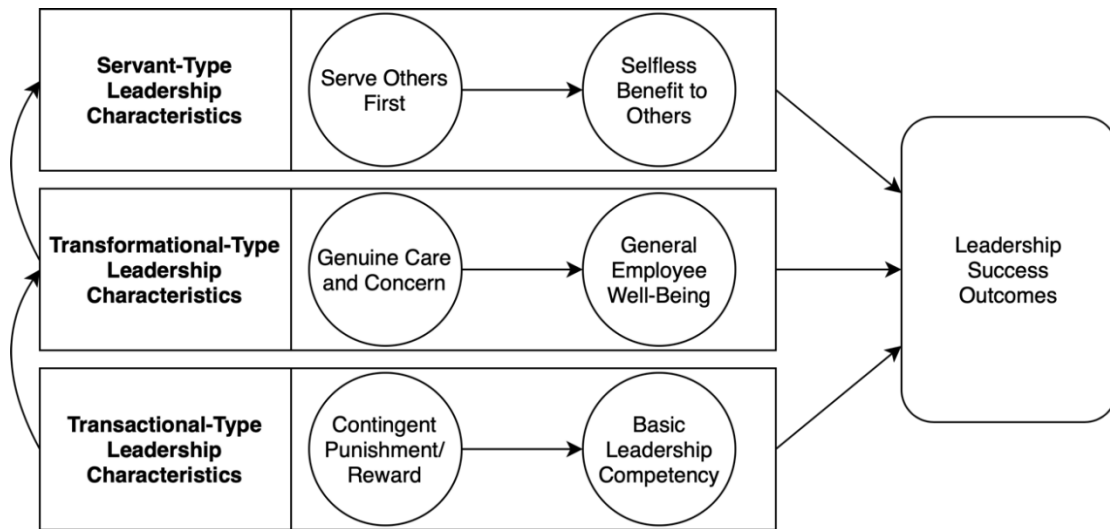


Figure 17: Leadership Hierarchy Concept According to Grisaffe et al. (2016)

Although Grisaffe et al. (2016) were able to provide initial empirical evidence for their proposed model, this thesis will draw on conceptualizations of servant leadership that are more widely used in the prevailing literature. However, the presented study underlines the value of servant leadership in positive outcomes by showing that servant leadership explains unique variance beyond transactional and transformational leadership. This again underlines the relevance of this normative leadership model and highlights why servant leadership is examined as an independent variable in this thesis.

2.2.2.3 Negative and Destructive Leadership

In addition to desired leadership behavior resulting in many positive outcomes at various levels (employee, leader, organization), there are also behavior patterns of leaders which are negative in nature. This already leads to the first important discussion which has been held in the research field of negative leadership behavior. It was regarding the distinction between destructive leadership and destructive leader behavior, which was elaborated by Schyns and Schilling (2013) as follows:

The basic problem was that some researchers have taken the position that leadership is by definition positive and destructive leadership is a contradiction in terms and have therefore proposed other terminologies for negative leadership

behavior, such as supervision or headship, which has led to a fragmented structure of constructs dealing with the dark side of leadership (Yukl & van Fleet, 1992). In order to draw a clear line between destructive leadership and destructive leader behavior, the work of Thoroughgood, Tate, Sawyer, and Jacobs (2012) was used in particular, since they explicitly report destructive leader behavior. Destructive leader behavior was understood to be all voluntary actions of a person in a formal leadership role towards their employees and/or organization that other people would consider as deviant and hurtful (Thoroughgood et al., 2012). The behavior that is displayed can be either verbal or physical, active or passive, and direct or indirect (ibid.). Following Yukl's (2006) definition of leadership that leadership is a process of a leader's intended influence on those being led, they argued that a leader's repertoire of behavior is not always linked to the leadership task (Schyns & Schilling, 2013). Therefore, the concept of destructive leader behavior is broader and includes negative, harmful behavior such as drug abuse in the workplace or the theft of the organization's assets (Thoroughgood et al., 2012). Destructive leadership, on the other hand, has thus been defined more narrowly and only includes aspects that are linked to the influence of the leader on the employees (Schyns & Schilling, 2013). In summary, they found that destructive leadership is always targeted towards the employees, whereas destructive leader behavior can also be directly targeted towards the organization, e.g., theft. In their meta-analysis this finally resulted in the following definition:

Destructive leadership is "a process in which over a longer period of time the activities, experiences and/or relationships of an individual or the members of a group are repeatedly influenced by their supervisor in a way that is perceived as hostile and/or obstructive" (Schyns & Schilling, 2013, p. 141).

Specifically, this refers to actively hurtful and abusive behavior on a personal level, such as insulting, shouting and other humiliation of employees, which is often referred to in the literature as abusive supervision (May, Schilling, & Schyns, 2016; Tepper, 2000). Other types of behavior, such as exercising excessive control or exploiting employees, may also fall under the definition of destructive leadership if they are considered hostile by employees and occur regularly (May et al., 2016). According to May et al. (2016, p. 267) the following behaviors of the leader are covered by the definition of destructive leadership:

- Employees are treated in an unfriendly and rude manner

- Verbal aggression towards employees (e.g., insulting, shouting at)
- Release of built-up anger to employees
- Ridicule or humiliate employees in front of others
- Making employees responsible for the mistakes of the leader themselves
- Demonstratively deny employees recognition for good performance
- Punish employees arbitrarily
- Deceive, lie, or cheat on employees
- Abandon employees, behave disloyally
- Playing employees off against each other
- Bullying or patronizing employees
- Exclude employees, do not involve them in processes
- Put pressure on employees, intimidate them
- Overburden employees with tasks
- Claim performance/success of employees for themselves

Although this list is certainly not exhaustive, it provides a good overview of destructive leadership and paints a clear picture, especially when compared to the positive leadership approaches presented earlier.

Consequences of destructive leadership. Since leadership is never without effect on the employees, the organization, or the leaders themselves, the most important outcomes of destructive leadership are presented below. As mentioned before, Schyns and Schilling (2013) have carried out a comprehensive meta-analysis in which they have bundled the results of 57 individual studies. The results of the meta-analysis can be summarized as follows (Schyns & Schilling, 2013):

As one of the most important and interesting results, they found that not only all results were hypothesis-compliant, but the confidence intervals of the statistical analyses were narrow, which gave them more confidence in interpreting the effect sizes and directions of the investigated relationships. The results showed that especially the employee's attitudes towards the leader suffer from destructive leadership, i.e., trust in and amicableness for the leader decreased. This attitude of resistance makes it increasingly difficult for the destructive leader to get the employees to follow him. Furthermore, other outcomes also suffer from destructive leadership. For example, job satisfaction and the perception of justice

in the workplace also decrease, which in turn leads to a limited sense of well-being. In addition, negative affects of the employees increased. At the organizational level, the most important findings are that employee commitment declines and turnover intentions increase due to destructive leadership. What seems surprising at first glance is that the individual work performance of employees was only slightly negatively correlated with destructive leadership. On a closer look, however, this behavioral pattern appears to be beneficial for the employees themselves since an active refusal to perform potentially goes hand in hand with an escalation of destructive behavior. Nevertheless, the counterproductive work behavior of employees, including absenteeism, theft, and vandalism of work equipment, increased with destructive leadership. These associations were further strengthened when the leader was perceived as a representative of the organization, the so-called supervisor's organizational embodiment (Shoss, Eisenberger, Restubog, & Zagenczyk, 2013). In addition, there is evidence to suggest that the mere observation of abusive supervision, in the sense of a vicarious experience, leads to negative feelings and behavior in the observer, this effect being even more pronounced when the observer is also a victim of abusive supervision (Harris, Harvey, Harris, & Cast, 2013).

Since the concept of abusive supervision is most widespread in research on destructive leadership (following the meta-analysis of Schyns and Schilling (2013), most search hits were obtained with this term and the abusive supervision scale was also most frequently used), the following figure 18 presents the path model that visualizes positive and negative effects of abusive supervision on employee productivity (Tepper, Simon, & Park, 2017).

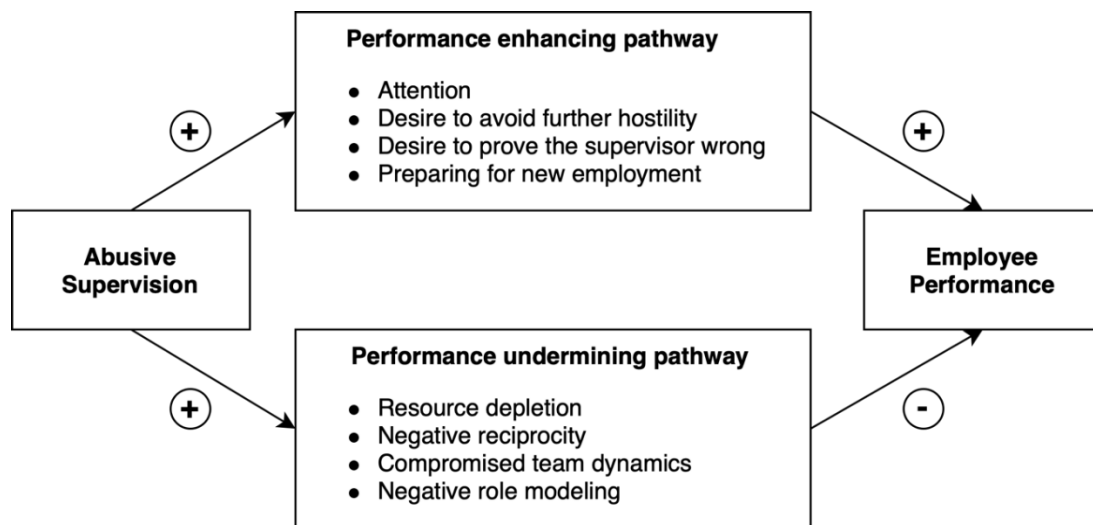


Figure 18: Positive and Negative Pathways of Abusive Supervision According to Tepper et al. (2017, p. 135)

In their review, Tepper et al. (2017) made it clear that the empirical evidence for the performance undermining pathway is compelling, but that on the other hand there are voices that also consider a performance enhancing pathway to be possible (Bies, Tripp, & Shapiro, 2016). At the same time, Tepper et al. (2017) expect that the performance undermining pathway has a stronger influence than the performance enhancing pathway, since the current literature is to be understood in such a way that leaders can achieve positive outcomes despite their hostility and not because of it. However, they argued that future research should examine both positive and negative consequences of abusive supervision to collect empirical data to support their model.

What are antecedents of destructive leadership? For example, Martinko, Harvey, Brees, and Mackey (2013) discussed various antecedents of the onset of destructive leadership in their review article, including stress, conflicts in the work context, the personal difference between the leader and subordinates in terms of values and beliefs, and family problems. In addition, personality traits such as narcissism, Machiavellianism and psychopathy, in their subclinical manifestations (referred to as the dark triad, e.g., Spain, Harms, and LeBreton (2014)), were also regarded as possible preconditions for destructive leadership, as they represent

dispositional tendencies towards self-interest and not the interest of others, but rather at the expense of others (Krasikova, Green, & LeBreton, 2013; Spain et al., 2014). In their literature review, Tepper et al. (2017) have identified three core mechanisms that underlie the emergence of abusive supervision, a significant element of destructive leadership. While acknowledging that three core mechanisms and underlying theories are initially very sparse, namely social learning, identity threat, and impairment of self-regulation, they were also convinced that these theories could subsume many possible explanations for why abusive supervision is exercised. They summarized the theoretical mechanisms in their model as follows (Tepper et al., 2017):

Social learning is classified as a distal mechanism that can influence the identity threat and self-regulation. On the one hand, social learning processes can shape perceptions of leadership and affect which factors are perceived as threatening. On the other hand, social learning guided by beliefs regarding the adequacy of abusive supervision may influence how much a person is self-regulating to resist drives to behave abusively. Self-regulation can also be directly influenced by identity threats, as leaders who perceive that their identity is threatened run the risk of depleting their self-control resources. Conversely, the self-regulation impairment can also influence the identity threats. As personal resources diminish, the fundamental need to conserve resources makes leaders particularly vulnerable to threats from their surroundings. These interconnections can be seen in figure 19.

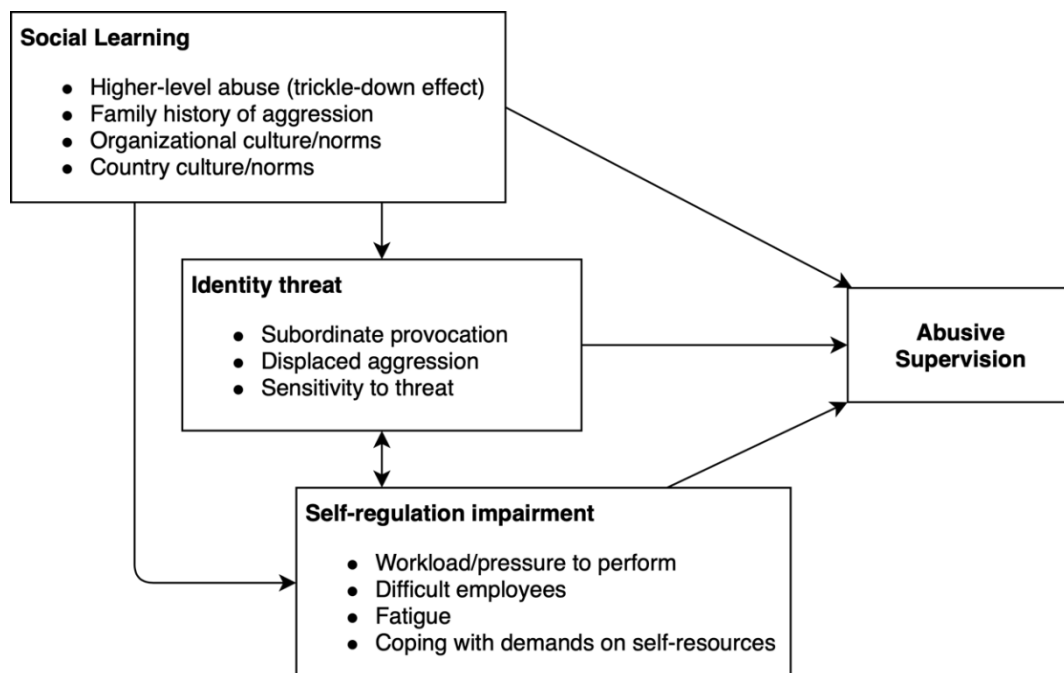


Figure 19: Mechanisms Causing Abusive Supervision According to Tepper et al. (2017, p. 144)

2.2.3 Concluding Remarks

Starting with the FRL model (Bass & Riggio, 2006) which integrated transactional leadership (Waldman et al., 1990), transformational leadership (Bass, 1985), and supplementing the FRL model with aspects of instrumental leadership (Antonakis & House, 2014) and moral leadership theories (Lemoine et al., 2019), the fullest full range of positive leadership ideas was presented. The verification of the augmenting effect provided first evidence for the incremental value of different leadership theories (Bono & Judge, 2004). Instrumental leadership aspects were also shown to explain unique variance beyond transactional and transformational leadership (Antonakis & House, 2014). Incremental validity was also shown for servant leadership, as a moral leadership approach, over and above the FRL model (Grisaffe et al., 2016). For this reason, in figure 20 the concept of leadership hierarchy (ibid.) is supplemented by the instrumental aspects of leadership, namely strategic leadership and follower work facilitation (Antonakis &

House, 2014). This provides a holistic picture of positive leadership theories from the literature.

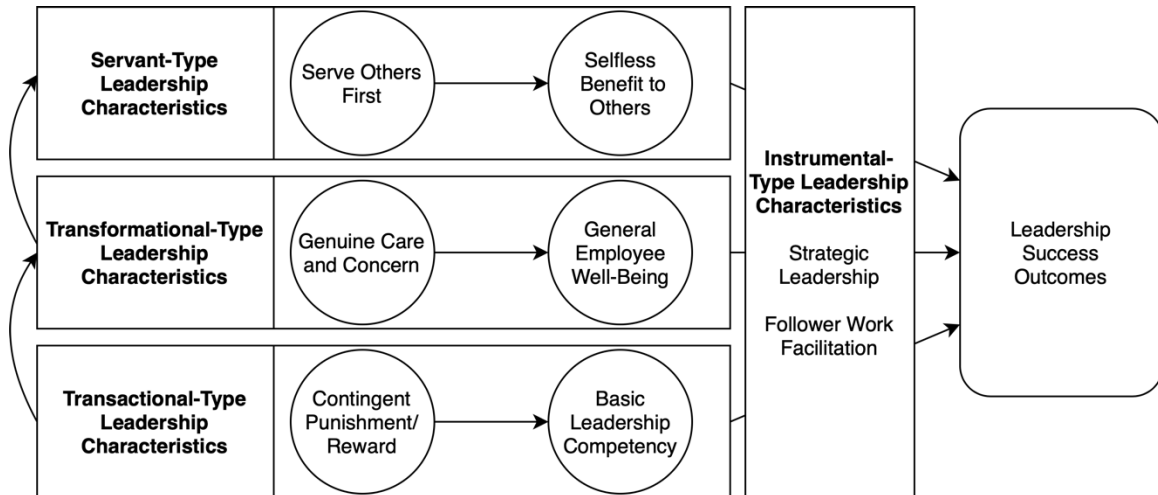


Figure 20: Extended Leadership Hierarchy Concept (Antonakis & House, 2014; Grisaffe et al., 2016)

Since servant leadership is at the top of the hierarchy and even after a meta-analysis it can be assumed that this leadership theory has a promising future (Hoch, Bommer, Dulebohn, & Wu, 2018), I decided to analyze servant leadership regarding its potential for health-related outcomes of employees and leaders. Compared to ethical and authentic leadership, which also fall under moral leadership approaches (Lemoine et al., 2019), Hoch et al. (2018) draw the following conclusion concerning the incremental value of these leadership approaches compared to transformational leadership:

“The high correlations between both authentic leadership and ethical leadership with transformational leadership coupled with their low amounts of incremental variance suggest that their utility is low unless they are being used to explore very specific outcomes. Servant leadership, however, showed more promise as a stand-alone leadership approach that can help leadership researchers and practitioners better explain a wide range of outcomes” (p. 501f.).

Furthermore, based on comprehensive meta-analyses and review articles (Krasikova et al., 2013; Schyns & Schilling, 2013; Tepper et al., 2017), destructive leadership was defined, its effects presented, and antecedents highlighted. Although the presentation of positive leadership concepts was more comprehensive, the core of destructive leadership, which is home to various concepts and terms presented in the literature, such as abusive supervision, despotic leadership, petty tyranny, toxic leadership and many more (Schyns & Schilling, 2013), were brought to the point. Altogether it can be stated that besides the various extensions and additions to the FRL model, there are counter drafts to the desired or ideal-typical behavior of a leader. Even if the undesired, destructive behavior is not the primary subject of this thesis, it is necessary to present the empirical findings of destructive leadership regarding the mental health of employees and leaders in the further course of the thesis. Especially since this behavior is not only predisposed by personality (Spain et al., 2014) but can be a consequence of dynamic processes in social interaction, e.g., exhausted self-control resources of the leader (Tepper et al., 2017).

2.3 SERVANT LEADERSHIP AS FOCAL CONSTRUCT OF THE THESIS

2.3.1 Conceptualization

As servant leadership research has been emerging over the last two decades, it is necessary to define the term servant leadership for this dissertation. First, it is crucial to define servant leadership from other leadership models such as transformational leadership (Bass, 1999), ethical leadership (Brown & Treviño, 2006), and authentic leadership (Avolio et al., 2004). Second, it is important to provide a clear understanding of the term itself.

Eva et al. (2019) divided servant leadership research into three periods: the first period focused on the development of the servant leadership concept, mainly relying on elaborations of Greenleaf (1977) and Spears (1995). The second period is characterized by the development of different measures and predominantly cross-sectional study designs on the associations of servant leadership with outcomes and other leadership models. Since 2008 predominantly empirical studies have been published on servant leadership, transgressing from a conceptual idea

to an own empirical research stream. The goal of this third ongoing research period is to introduce more cleverly worked out research designs that go beyond a cross-sectional study design. Hence, the ambition is to engage in more complex study designs in the empirical section of this dissertation to continue in sense of the state-of-the-art research tradition in servant leadership research (refer to Eva et al., 2019).

Servant leadership has conceptually been distinguished from transformational leadership (van Dierendonck, 2011). Essentially, the goal of servant leadership is to focus on employees' basic psychological needs, compared to transformational leadership, which prioritizes organizational goals first (cf. Eva et al., 2019; van Dierendonck, Stam, Boersma, de Windt, & Alkema, 2014). Despite an overlap between both leadership styles, it is common-sense that the priorities of servant leaders are different from those of transformational leaders. While both leadership styles have a focus on the needs of followers, servant leaders act by the principles below, ordered by priority (Sendjaya, 2015):

1. Dedication to the followers
2. Organizational goals
3. Own, personal goals

Transformational leaders' motivation to focus on followers' needs arises from the idea that this will better enable them to reach organizational goals, while the focus of servant leaders is "followers first" and organizational goals are more a kind of by-product of their mere dedication to the followers' needs (Eva et al., 2019; Gregory Stone, Russell, & Patterson, 2004).

When comparing servant leadership to authentic leadership, it is widely accepted that a servant leader has to be authentic, especially in relationships and interactions with the followers, but their motives may be different from authentic leaders (Avolio & Gardner, 2005; Eva et al., 2019). This is a similar idea compared to the definition of servant and transformational leadership: the leaders' motives are different. The servant leaders' motivation to enact authentically in interaction with others may spring from an altruistic purpose to serve others. Hence, servant leaders are authentic not just for authenticity's sake, but by seeing a deeper purpose in serving others and having a positive impact on others (Eva et al., 2019).

Referring to Eva et al. (2019), ethical leadership (Brown & Treviño, 2006), on the other hand, is more rule-led and emphasizes, above all, that a leader needs to be both sincere and reliable. In contrast to servant leadership, there is little emphasis on being authentic and providing clear direction to the followers. Servant leadership, as opposed to ethical leadership, puts stewardship at the forefront as a central element, underlining long-term stakeholder orientation as well as organizational context and staff.

While the above-mentioned delineations of servant leadership to related constructs, such as transformational leadership, authentic leadership, and ethical leadership have been conceptually oriented, there is also empirical evidence of differences in these leadership styles. As Antonakis (2017) has already argued, it is important to provide evidence of incremental validity on proposed outcome variables, especially for closely linked constructs. This also applies to servant leadership and transformational leadership and has already been considered in four previous studies (Eva et al., 2019). These studies found that servant leadership explains variance beyond transformational leadership. Among further findings, Liden et al. (2008) have shown that servant leadership explains 19% more variance in community citizenship behavior than transformational leadership. In their meta-analysis, Hoch et al. (2018) showed that servant leadership explained on average 12% more variance in different follower outcomes than transformational leadership, which was significantly more incremental explained variance than ethical (6.2%) and authentic leadership (5.2%). In addition, servant leadership explained up to 26% more variance than transformational leadership, e.g., in the outcome variable job satisfaction (Hoch et al., 2018). Details can be found in table 4 below. In line with various published articles (for a comprehensive list see Eva et al. (2019)), I am convinced that servant leadership differs conceptually from other moral approaches to leadership, especially concerning overall goals and motives of the leader (Eva et al., 2019). Further support for this is provided by Lemoine et al. (2019) from a theoretical-conceptual perspective.

Table 4: Incremental Variance of AL, EL, and SL Compared to TFL According to Hoch et al. (2018)

Criterion	<i>k</i>	<i>R</i> ² (TFL)	ΔR^2 (AL)	ΔR^2 (EL)	ΔR^2 (SL)
Behavior					
Job performance	74	.07	.02	.01	.01
Overall OCB	36	.08	.03	.02	.09
Attitudes					
Engagement	14	.23	.03	.01	.10
Job satisfaction	55	.18	.06	.08	.26
Org. commitment	43	.18	.06	.04	.15
Relationship					
Trust in supervisor	23	.42	.10	.08	.19
Leader-Member-	20	.50	.05	.09	.11
Exchange					

Note. TFL = Transformational leadership, AL = Authentic leadership, EL = Ethical leadership, SL = Servant leadership. Each ΔR^2 represents the difference of the competing leadership theories (AL, EL, SL) compared to TFL.

Since servant leadership has been distinguished from other moral approaches to leadership, a clear definition of the term servant leadership follows, according to the most recent view of literature:

“Servant leadership is an (1) other-oriented approach to leadership (2) manifested through one-on-one prioritizing of follower individual needs and interests, (3) and outward reorienting of their concern for self towards concern for others within the organization and the larger community” (Eva et al., 2019, p. 114).

This definition includes three characteristics of the servant leader, namely motive, mode, and mindset, which will be described in more detail following the

definition of Eva et al. (2019): Firstly, servant leadership differs significantly in the personal motivation of the leader to take the lead. This motivation is fueled by turning away from self-orientation, which sharply contrasts with other styles of leadership that focus on pursuing the personal ambitions of the leader. The determination to serve others springs from their self-concept as a selfless and decent person. Servant leadership does not imply being amicable or polite. Usually, the leader needs to be psychologically mature and self-confident. Following that definition, individuals who are not willing to be in service to others are not suitable to act as servant leader. Secondly, the so-called mode of servant leadership recognizes the uniqueness of each employee and the resulting different desires, interests, and needs, as well as individual strengths and weaknesses. Each leader-follower relationship could manifest itself in many ways, and therefore servant leaders have a genuine interest in understanding employees' personal backgrounds and beliefs, as well as their core values. This can lead to a blurring of boundaries between professional and private relationships of employees and leaders. Servant leaders mainly care about the personal development of their employees, such as their emotional maturity and their psychological well-being, while other leadership styles primarily focus on the financial and organizational goals of the company. Thirdly, the mindset of the servant leader is very similar to the way a trustee thinks. Servant leaders, in their trustee-like role, are nurturing and developing followers and further resources across the organization alike in a responsible manner. They also maintain this focus on developing followers to take responsibility for their well-being and serving the larger community. The momentum of servant leadership successively moves the followers from self-orientation to others-orientation, turning them into pro-social and productive catalysts capable of positively changing the other people's lives and repairing busted structures in their social world.

In summary, Eva et al. (2019) described their three features of servant leadership as a *conditio sine qua non*, especially emphasizing that, because of the dimensionality of the underlying construct, researchers may focus on different facets without disregarding the features mentioned above.

2.3.2 Measurement

As typical for research projects in social sciences, most phenomena are not directly measurable through manifest variables. This dissertation project methodologically engages in a theory-led deductive design where hypotheses are tested by quantitative statistics. There is a need to measure such complex phenomena like servant leadership, the method to this is to measure those psychological constructs as latent variables consisting of more than one manifest variable. While servant leadership is the main object of investigation, this chapter gives an overview of the different measures found in literature in more detail comparing to the other constructs introduced later in the conducted studies.

The most comprehensive and latest literature review, covering a structured analysis of existing servant leadership measures, stems from Eva et al. (2019). The results of Eva et al. (2019) are summarized below:

So far, they have identified 16 different measures in the servant leadership-related literature. In their analysis, in comparison to van Dierendonck (2011), the scales are not evaluated for the prevailing servant leadership dimensions. In contrast, the scales were evaluated and compared in terms of their theoretical and methodological quality regarding the design and validation stages of scale development. The seven stages of scale development and validation according to Churchill (1979) and Hinkin, Tracey, and Enz (1997) were used for this purpose. These seven stages consist of “item generation, content adequacy assessment, questionnaire administration, factor analysis, internal consistency assessment, construct validity, and replication” (Eva et al., 2019, p. 116). Many of the evaluated scales show a weak content validity; therefore, it is particularly important in the first two steps to pay attention to content validity and an inherent clear link between content and theoretical model (Hinkin, 1995). While some of the evaluated scales contained no information at all on item generation, the others relied on deductive procedures, such as literature research, and inductive procedures, such as expert interviews. Only 7 out of 16 scales have taken a further step towards quality assurance in terms of content: evaluation by experts concerning the criteria representativeness, comprehensiveness, and clarity (Grant & Davis, 1997). The chronologically consecutive steps, following Hinkin (1995), were described for most scale developments, as these already belong to the de facto standard. It was

noticeable that only 8 authors performed an exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA). The remainder performed an EFA only. In the sense of construct validity, Eva et al. (2019) tested for discriminant, convergent and criterion-related validity and also considered publications after the actual scale development. However, only 7 scales were analyzed within the review process that provided profound evidence of construct validity. In summary, Eva et al. (2019) conclude that for future research in the field of servant leadership, three measures have undergone a high-quality, rigorous process of scale development and thus exhibit very good psychometrical characteristics. It should be noted that these three measures differ in their focus. Therefore, an adequate selection must be made, depending on the study to be carried out. The three recommended measures, in alphabetical order, are SL-7 (Liden et al., 2015), SLBS-6 (Sendjaya, Eva, Butar Butar, Robin, & Castles, 2019) and SLS by van Dierendonck and Nuijten (2011). These three compared measures can be found in table 5 below.

Table 5: Three Recommended Servant Leadership Measures by Eva et al. (2019, p. 116)

	SL-7	SLBS-6	SLS
Article(s)	Liden et al. (2015, 2008)	Sendjaya et al. (2019; Sendjaya, Sarros, and Santora (2008)	van Dierendonck and Nuijten (2011; van Dierendonck et al. (2017)
# Items	7 / 28	6 / 35	18 / 30
# Dimensions	7	6	8
Dimensions	Emotional healing, creating value for the community, conceptual skills, empowering, helping subordinates grow and succeed, putting subordinates first, behaving ethically	Voluntary subordination, authentic self, covenantal relationship, responsible morality, transcendental spirituality, transforming influence	Empowerment, accountability, standing back, humility, authenticity, courage, interpersonal acceptance, stewardship
Theoretical uniqueness	Include concern towards community and followers' conceptual skills (not just character-and behaviors)	Holistic aspect of servant followers' development, including spirituality (meaning, purpose)	The eight dimensions operationalize the "leader"-side and the "servant"-side of servant leadership

The measures by Liden et al. (2015) and Sendjaya et al. (2019) are very easy to use due to the small number of items (7 for the SL-7 and 6 for the SLBS-6) and do not lengthen the questionnaire unnecessarily. As described above, however, they differ in their focus. Besides the character-based items typical for servant leadership, Liden et al. (2015) focus on two further aspects, namely community-orientation and competencies of the leader. In comparison, Sendjaya et al. (2019) emphasize the spiritual dimension of servant leadership. Depending on the aim

of the study and its granularity in the analysis, corresponding long versions with dimensional measurement also exist for the aforementioned measures (Liden et al., 2008; Sendjaya et al., 2008). It only makes sense to use the short scales if a global servant leadership construct is to be measured (Eva et al., 2019). The respective long versions are to be used for analyses on the dimensional level of the servant leadership phenomenon. Another alternative, as analyzed by Eva et al. (2019), is the measure by van Dierendonck and Nuijten (2011). They measure servant leadership on a dimensional level and contrasts the servant- and leader-side. In the juxtaposition, it was emphasized that the leader should develop the employees (servant-side), but at the same time, the employees should also be made accountable for their actions (leader-side). The SLS has also recently become available in a shorter version, which comprises 18 items (van Dierendonck et al., 2017).

Since the selection of a suitable measure depends on the focus of the study and the depth of the analysis to be aimed for, van Dierendonck and Nuijten's (2011) measure is used for this thesis. I describe the reasons for this decision in more detail below. First, we should find a consistently used measure for all studies. Since the first study focuses on the antecedents of servant leadership and considers compassionate love, in particular, it is appropriate to use van Dierendonck and Nuijten's (2011) measure, since he has already published a conceptual paper explaining why compassionate love is an antecedent of servant leadership (van Dierendonck & Patterson, 2015). Second, mediators and moderators of servant leadership will be analyzed for certain outcome variables in further studies. For this purpose, it seems reasonable to collect the servant leadership construct on a dimensional level to derive more precise conclusions from the analysis. Third, it is a significant advantage that the SLS already has a validated form in German. Since the data collection of all three studies takes place in German-speaking countries, it is essential to have the measures to be used available in German. In principle, the back-translation method (Brislin, 1970) is always available, but it is a quality advantage if a measure has already been empirically validated in the respective translation. For this reason, the already translated measure of Verdorfer and Peus (2014) is used in this dissertation.

2.3.3 Empirical Research Findings

In this chapter outcomes, antecedents, mediators, and moderators of servant leadership are presented. Current literature reviews and meta-analyses are used for this section. After extensive research in journals on the subject of leadership research, the works of van Dierendonck (2011), Liden et al. (2014), Eva et al. (2019), Langhof and Guldenberg (2019), Zhang et al. (2019), Xu et al. (2020), and Allan Lee, Lyubovnikova, Tian, and Knight (2020) were considered particularly relevant, as both the quality of the journal and the topicality of the publication seemed appropriate. While these works have been used as a source of guidance, the original works are also quoted in the following chapters. These different meta-analyses and (systematic) literature reviews are summarized in the following table 6.

Table 6: Overview of (Systematic) Literature Reviews and Meta-Analyses on Servant Leadership

Article	No. of studies analyzed	Key takeaways	Methodology
van Dierendonck (2011)	14 (peer-reviewed / follower outcomes) due to the appendix	Definition and key characteristics; conceptual model; SL in relation to other theories; main measurement instruments; antecedents and consequences	Literature review
Liden et al. (2014)	Not reported explicitly in the chapter	Comprehensive theoretical model that incorporates antecedents, outcomes, processes (mediators), and moderators	Literature review
Eva et al. (2019)	285 (270 published and 15 unpublished papers) of which 205	Comprehensive definition; recommended measures; nomological	Systematic literature review

	empirical studies, 68 conceptual studies and 12 literature reviews	network (antecedents, mediators, moderators, outcomes); theoretical, and research design and analysis advancement	
Langhof and Guldenberg (2019)	49 thereof 47 empirical studies and 2 conceptual papers	Antecedents and outcomes; comprehensive servant leadership model	Systematic literature review
Zhang et al. (2019)	125 studies including 34,698 participants	Outcomes (job-related, leader-related, and group-related) of SL; cultural moderators	Meta-analysis
Xu et al. (2020)	Not reported explicitly in the chapter	Nomological network; integrative summary of academic research on servant leadership	Literature review (state-of-the-art)
Allan Lee et al. (2020)	124 studies (130 independent samples)	Incremental/predictive validity of SL beyond transformational, authentic, and ethical leadership; mediation of individual- and team-level outcomes partially mediated by trust in the leader, procedural justice and LMX; moderators	Meta-analysis

This chapter will continue to be organized as follows: First the outcomes will be described at follower level, then at leader level. After that, antecedents of different origins will be presented. Subsequently, psychological processes, i.e., mediators of servant leadership, based on different theories will be described, followed by different boundary conditions of servant leadership being presented.

Finally, a nomological network of servant leadership is outlined, which represents the latest state-of-the-art in the field of servant leadership research.

2.3.3.1 *Outcomes*

The outcomes at follower level are multi-layered. In order to further structure these outcomes, I make a distinction in the following between attitudinal, behavioral, performance, and health-related well-being outcomes (Eva et al., 2019; Zhang et al., 2019).

Attitudinal outcomes. In industrial and organizational psychology, work-related attitudes are often examined as outcome variables. It comes as no wonder that many studies have analyzed a wide range of attitudinal outcomes, e.g., work motivation, job satisfaction, and organizational commitment (C. Y. Chen, Chen, & Li, 2013; Donia, Raja, Panaccio, & Wang, 2016; J. Hu & Liden, 2011; Mayer, Bardes, & Piccolo, 2008), echoing the holistic, developmental character of servant leadership (Eva et al., 2019). These researchers derive associations between servant leadership and such outcomes in the prevailing literature with different theories:

One approach is e.g., the social exchange theory (Cropanzano & Mitchell, 2005; Homans, 1958). Following this theory, social exchange is based on reciprocity, i.e., this norm motivates employees to return favors to their leaders. Since servant leaders help their employees to satisfy their needs and build stable relationships with them, they are more motivated to do their work for their leaders (Zhang et al., 2019). Van Dierendonck et al. (2014) found that servant leadership is positively associated with an employee's perception of empowerment.

Another approach to the theoretical foundation of the researched associations of servant leadership on specific outcomes is the concept of autonomous motivation, which is based on the self-determination theory (Deci & Ryan, 2008b; Gagné & Deci, 2005; Ryan & Deci, 2000a). This theory postulates that there are three basic psychological needs, autonomy, competence, and social relatedness. If these basic needs are satisfied in the work context, the employees are autonomously motivated. Different researchers assumed that servant leadership, through the inherent centering on the employee, satisfies basic psychological

needs and thus leads to positive attitudes (Chiniara & Bentein, 2016; Mayer et al., 2008; van Dierendonck et al., 2014). Mayer et al. (2008) published the first study based on this theory. Here, as with van Dierendonck et al. (2014), only the overall need satisfaction was measured. In comparison, Chiniara and Bentein (2016) measured the satisfaction of needs related to autonomy, competence and relatedness. We can see a difference in the depth of detail of the analysis, whereby the underlying theoretical line of argumentation was continued. The advantage of self-determination theory over social exchange theory lies in its operationalization for empirical studies such as this thesis. There are various scales to measure the satisfaction of basic psychological needs (e.g., van den Broeck, Vansteenkiste, Witte, Soenens, & Lens, 2010). Therefore, empirical evidence, a confirmation of theory, may be more workable.

Furthermore, van Dierendonck (2011) discussed self-actualization as outcome variable. He followed the argumentation of famous psychologists such as Allport, Rogers, Fromm and Maslow that pursuing personal growth and self-actualization is a central factor for motivation in human life. Self-actualization gives a meaning to life because it is closely linked to self-acceptance and self-respect and thus ensures a positive attitude towards oneself. Through self-actualization, this experienced meaningfulness also includes a sense of wholeness along with a sense of purpose in life. Van Dierendonck (2011) already recognized first evidence for this theory in the studies of Mayer et al. (2008) and Neubert, Kacmar, Carlson, Chonko, and Roberts (2008). In the sense of argumentation about meaningfulness in life, it was shown that servant leadership helps employees to experience their workplace as more meaningful (Khan, Khan, & Chaudhry, 2015). This may also be beneficial for overall perceived meaningfulness in life.

Behavioral outcomes. In addition to attitudinal outcomes, which primarily include the employee's motivation and organizational commitment, servant leadership also affects the individual behavior of the employees. Zhang et al. (2019) propose a distinction into two categories, namely in-role behavior, and discretionary behavior. In the category in-role behavior the authors subsume e.g., job performance and service quality. In the discretionary behavior category, for example, creativity and organizational citizenship behavior (OCB) are defined. Eva et al. (2019), on the other hand, do not include job performance and service quality.

ty in the category of behavioral outcomes, but in a separate category of performance outcomes. This dissertation will follow this order structure because it captures the phenomena described more precisely and leaves room for performance-related outcomes that cannot be directly linked to the employees' behavioral aspects.

Following the literature review by Eva et al. (2019), OCB is the most widely researched behavioral outcome variable associated with servant leadership (e.g., Chiniara & Bentein, 2016; Grisaffe, Vanmeter, & Chonko, 2016; Panaccio, Henderson, Liden, Wayne, & Cao, 2015; Walumbwa, Hartnell, & Oke, 2010). This relationship was again confirmed in a recently published meta-analysis (Allan Lee et al., 2020): significantly positive correlations between servant leadership and OCB were found at both individual and team level, with results from 50 studies being analyzed. At the individual level, the effect size of the relationship between servant leadership and creativity marginally exceeded the effect size of the relationship between servant leadership and OCB in this meta-analysis. In addition to OCB, some studies have already shown a positive link between servant leadership and helping behavior (Neubert, Hunter, & Tolentino, 2016). Both OCB and helping behaviors are important outcomes of servant leadership, as servant leaders tend to show altruistic behavior (Parris & Peachey, 2013; van Dierendonck, 2011) and to involve themselves in OCB (Eva et al., 2019). This is in line with the test of servant leadership described by Greenleaf (1977), according to which servant leadership should generate followers that are likely to serve their organization and the people in their environment (cf. Eva et al., 2019).

Moreover, proactive behavior (Bande, Fernández-Ferrín, Varela-Neira, & Otero-Neira, 2016) and employee-related corporate social responsibility (Grisaffe et al., 2016) were examined as positively associated outcome variables of servant leadership. Additionally, it was shown by Sendjaya et al. (2019) that servant leadership reduced employee deviance. Furthermore, servant leadership was associated with reducing the avoidance of an employee to take a leadership role (Lacroix & Pircher Verdorfer, 2017).

Performance outcomes. In addition to attitudinal and behavioral outcomes, performance outcomes were also examined. In their systematic literature review, Eva et al. (2019) have summarized results at different levels: These include out-

comes at the individual level, such as the work of Linuesa-Langreo, Ruiz-Palomino, and Elche-Hortelano (2017), which has shown that individual customer service performance can be increased through servant leadership. Especially for customer-oriented performance parameters, such as customer service performance and quality, empirical support was found for a trickle-down effect of servant leadership (Z. Chen, Zhu, & Zhou, 2015; Ling, Lin, & Wu, 2016; Wang, Xu, & Liu, 2018). This effect describes the phenomenon that behavior patterns, here serving behavior, which is exemplified by top management, continues in the middle and lower management levels and finally also transfers to the employees (Wang et al., 2018). This paradigm is primarily explained by the social learning theory (Bandura, 1977b): when executives are salient models, employees learn from their behavior through observation and adopt it into their repertoire of actions. Other customer-related variables, such as customer-oriented prosocial behavior (Z. Chen et al., 2015), as well as customer value co-creation (Hsiao, Lee, & Chen, 2015), were also researched. At team level, not only outcome variables such as team performance (J. Hu & Liden, 2011), but also group social capital (Linuesa-Langreo, Ruiz-Palomino, & Elche-Hortelano, 2018), among many others (for a comprehensive analysis see Eva et al. (2019)), were associated with servant leadership. The meta-analysis by Allen Lee et al. (2020) analyzed performance at both individual and team level: A total of 37 study results were included, which showed that there are significant correlations between servant leadership and performance at both levels, although this effect was stronger at team level. At the same time, it was noticeable that the effect sizes between servant leadership and performance were weaker than those between servant leadership and OCB, which suggests that servant leadership is more important for discretionary types of behavior (e.g., OCB) than for in-role behavior (e.g., in-role performance; Allen Lee et al., 2020). At the level of the entire organization, outcome variables such as store performance (Giolito, Liden, van Dierendonck, & Cheung, 2020; Liden, Wayne, Liao, & Meuser, 2014) and overall company performance (S. J. Peterson, Galvin, & Lange, 2012), measured by return on assets, were linked to servant leadership. Moreover, servant leadership is positively associated with creativity at the individual level (Jin Yang, Liu, & Gu, 2017), at the team level (Liden et al., 2015; Jin Yang et al., 2017) and at the organizational level (Liden, Wayne, et al., 2014). This association between servant leadership and creativity on an individual

level could, in addition be confirmed by meta-analytical results, which could demonstrate across 16 studies that servant leadership has a significant positive association with creativity (Allan Lee et al., 2020).

Well-being outcomes. Whether positive or negative behaviors of leaders: In the tradition of leadership research, leadership behavior is generally regarded as a central element that can influence the well-being of employees in the work context. Negative leadership behavior, such as destructive leadership behaviors like abusive supervision (Tepper et al., 2017), is psychologically straining for employees and thus has a detrimental effect on their emotional exhaustion, a facet of burnout (for a meta-analysis see Schyns and Schilling (2013)). Although Vennemann and Brouns (2019) were able to show in their study that emotional intelligence functions as a protective resource for the relationship between abusive supervision and irritation, a measure of psychological strain, the negative outcomes of destructive leadership on well-being predominate. Positive leadership styles such as authentic leadership (Ilies, Morgeson, & Nahrgang, 2005), transformational leadership (Arnold, 2017) and servant leadership (van Dierendonck, 2011), on the other hand, support and nourish employees' resources to cope with the demands of the job and thus reduce potential stressors and promote their well-being.

Since well-being outcomes and their mediators regarding servant leadership are one of the aims of this dissertation, it is particularly important to describe the state of research. It was found that the spiritual values of a leader, in the sense of servant leadership, are positively linked to eudaemonic well-being, whereby this relationship was completely mediated by autonomous motivation (C. Y. Chen et al., 2013). In well-being research, a distinction is made between hedonic and eudaemonic well-being, whereby hedonic well-being increasingly deals with happiness and eudaemonic well-being more with the potential of a person (Ryan & Deci, 2001). The latter is more linked to autonomous motivation (Ryan & Deci, 2000b) and thus also decisive for the argumentation why servant leadership has a positive effect on well-being (C. Y. Chen et al., 2013): Through providing trust and empowerment, the subordinates are given a feeling of autonomy and significance, which promotes intrinsic motivation and, in turn, eudaemonic well-being. In a similar vein, Giolito and van Dierendonck (2015) have found that servant leader-

ship is positively linked to eudaemonic well-being. Consistent with this finding, it was also shown that servant leadership is negatively associated with burnout (Babakus, Yavas, & Ashill, 2011). This relationship was mediated by person-job-fit, i.e., servant leadership is positively associated with person-job-fit, which in turn is negatively associated with burnout. Further studies have analyzed this relationship between servant leadership and burnout on a dimensional level, namely cynicism and emotional exhaustion. It is also evident at this level that servant leadership is negatively linked to both cynicism (Bobbio, van Dierendonck, & Manganeli, 2012) and emotional exhaustion (Tang et al., 2016). Emotional exhaustion in this study was directly negatively linked to servant leadership and simultaneously acted as a mediator for work-family related outcomes such as work-to-family conflict and work-to-family positive spillover (Tang et al., 2016).

Furthermore, Coetzer, Bussin, and Geldenhuys (2017a) were able to show that servant leadership has increased work engagement and at the same time reduced burnout among the employees of a construction company, mediated through job resources. In comparison to the theoretical considerations of C. Y. Chen et al. (2013), here it is argued via the JD-R model (Demerouti et al., 2001; Schaufeli, 2015) and not via autonomous motivation in the sense of self-determination theory according to Deci and Ryan (2008b). This illustrates the theoretical diversity by which such relationships between leadership models and outcomes on the employees can be derived. The theoretical deduction for the studies carried out in the context of this dissertation is explained in the respective chapters of the hypothesis development.

But what about the leader? Since this thesis does not only focus on the employee, but considers the health of the leader as well, it is therefore relevant to summarize the literature and research results that have analyzed outcomes of servant leadership at the leader level. Outcomes at the leader level have so far focused primarily on relationship-related variables (Eva et al., 2019; Zhang et al., 2019): For example, it could be shown that servant leadership can increase the perceptions of trust in the leader and that this can have an impact on the performance of the team. This correlation could even explain 10% more variance than the same relationship for transformational leadership (Schaubroeck, Lam, & Peng,

2011). In addition, an increased perceived effectiveness of those leaders who show servant leadership behavior was shown in a public school sample of principals and teachers (Taylor, Martin, Hutchinson, & Jinks, 2007). Bobbio et al. (2012) have demonstrated that servant leadership positively relates to perceived integrity of the leader. In two further studies, Xu et al. (2020) found direct and indirect support for the positive effects of servant leadership on the leader itself. Firstly, based on the COR theory, it could be shown in a sample in China across different industries that servant leadership not only has a positive effect on outcomes in the work context, but even in the family context (Xu & Wang, 2018). These positive links could be explained by the reduced loss of psychological resources and the increased build-up of psychological resources in the leader through servant leadership practices. Secondly, indirect support was found for the fact that servant leadership can have a positive effect on the leader. In another study it was shown that servant leadership increases OCB directed towards the leader (Bavik, Bavik, & Tang, 2017), which in turn is associated with a reduction in the workload of the leader, which should in turn have a positive effect on the leaders' well-being (Xu et al., 2020).

As described above, social exchange theory (Cropanzano & Mitchell, 2005) is a common foundation for research in the field of servant leadership. Since previous work on leader level has dealt specifically with relational issues, it seems logical that social exchange theory has been used as a framework in former studies. Ng, Koh, and Goh (2008) already described that the exchange dynamics between follower and servant leader can be explained by the social exchange theory. This can benefit servant leaders who have developed their employees as servant followers, since these employees show reciprocal behavior in terms of help and support towards the servant leader (Xu et al., 2020). It is therefore not surprising that empirical evidence was also found for a positive relationship between LMX and servant leadership (Henderson, Liden, Glibkowski, & Chaudhry, 2009).

While few studies indicate that servant leadership has a positive effect on individual outcomes of the leader, even fewer empirical research results are available on negative consequences of servant leadership on the leader. Based on the organizational role theory (R. L. Kahn et al., 1964), Xu et al. (2020) summarized the reasoning of Liden, Panaccio, et al. (2014) and Panaccio, Donia, Saint-Michel, and Liden (2015): They assumed that servant leadership can lead to role

conflicts, role ambiguity and role overload, which can result in emotional exhaustion and be accompanied by work-to-family conflict. A recent study suggests that perspective taking is an important individual variable of the leader, which determines whether daily servant leadership behavior is associated with self-control depletion and withdrawal from the leadership role in a negative (high in perspective taking) or positive (low in perspective taking) way (Liao, Lee, Johnson, & Lin, 2020). It is not easy to establish oneself as a servant leader in an organization and to always put the interests of employees before one's own. Even if servant leaders are deeply convinced that they show such behavior like humility, empowerment, and stewardship, it could still be a psychological burden for servant leaders to show this behavior. The research results to date have paid little attention to the immediate consequences for the leader. Therefore, the second research question will deal with this topic: what is the (in-)direct association between the practice of servant leadership and mental health outcomes of the leader?

2.3.3.2 *Antecedents*

In general, antecedents of leadership not only encompass various aspects, such as culture at team and organizational level, hierarchical influences, organizational policies, but moreover the leader's socio-demographic data and personality (Eva et al., 2019). Previous empirical work has focused primarily on the personality and gender of the leader (leader characteristics) as antecedents of servant leadership, although the work of van Dierendonck (2011) and Liden, Panaccio, et al. (2014) have presented promising conceptual approaches, including situational influences and specific behavior and attitudes of the leader (Eva et al., 2019). Since the predominant view has so far concentrated on leader characteristics, there is a distinction between two perspectives with regard to the antecedents of servant leadership, namely the nature and nurture perspectives (Xu et al., 2020): The nature perspective includes all characteristics that are relatively stable or non-changeable, which includes demographic data, such as gender, on the one hand, and personality, such as Big Five dimensions or even dark triad traits, such as narcissism, on the other. In contrast, the nurture perspective focuses on aspects that are more malleable than the aforementioned characteristics, such as role modelling by hierarchically superior individuals, emotional intelligence, or identification with the organization.

Considering from a nature perspective. Some empirical findings suggest that leaders' demographic characteristics determine servant leadership behavior (for literature reviews refer to Eva et al., 2019; Xu et al., 2020). A few studies have found that women are more likely than men to engage in servant leadership (Fridell, Newcom Belcher, & Messner, 2009), women show significantly higher levels of values like caring and serving others that are closely related to servant leadership (de Rubio & Kiser, 2015), and women show significantly higher levels of individual dimensions of servant leadership (altruistic calling, emotional healing, and organizational stewardship) than men (Beck, 2014). Furthermore, it was shown that people are more likely to expect women to show servant leadership behavior than men, although the study was limited by the sample consisting exclusively of students (Hogue, 2016). Another study could not find a significant effect for gender and indicated that women and men showed equal levels of both communal and agentic servant leadership dimensions (Barbuto & Gifford, 2010). Beck's (2014) study found differences at the dimensional level of servant leadership depending on sex, but these were no longer evident at the aggregated, unitary level of the servant leadership construct. From these contradictory results Xu et al. (2020) concluded that the prevalence of servant leadership behavior is less about sex differences (men/male versus women/female) than about gender differences, in the sense of masculinity and femininity: women and men who show typically feminine qualities including support, empathy and caring are more inclined to show servant leadership behavior compared to people who show typically masculine characteristics, for example, aggression and competitive drive. The contradictory study situation gave rise to the call for further research on the question of how sex and gender determine servant leadership (Eva et al., 2019).

The nature perspective is not limited to demographic characteristics but includes the personality of the leader and other stable traits. Persons with a high level of agreeableness and a low level of extraversion exhibited more servant leadership behavior (Hunter et al., 2013). These associations between agreeableness, extraversion and servant leadership could be affirmed in further analyses and were even further strengthened by an ethical organizational climate (Brouns, 2019; Brouns & Externbrink, 2018). Furthermore, core self-evaluations (CSE) were positively linked to the level of servant leadership perceived by employees (Flynn, Smither, & Walker, 2016). Additionally, dispositional mindfulness as a

predictor for servant attitudes, such as a non-self-centered motivation to lead, and for actual servant leadership behavior, such as humility and standing back, was empirically studied (Verdorfer, 2016). Beyond these positively connoted traits, one of the dark triad traits, narcissism, has been investigated in studies as an antecedent of servant leadership. For example, S.J. Peterson et al. (2012) found in a sample of CEOs that narcissism was negatively associated with servant leadership. Brouns, Externbrink, and Blesa Aledo (2020) were able to replicate this association in a further sample, and with compassionate love, based on the theoretical foundation of van Dierendonck and Patterson (2015), they also investigated a positive antithesis to narcissism, whereby compassionate love could explain a substantially higher proportion of variance in servant leadership than narcissism (10.5% vs. 3.3%, in two separate linear regression models). With this study, compassionate love joins the ranks of further theoretically founded (van Dierendonck & Patterson, 2015) and empirically investigated (Brouns et al., 2020) antecedents from a nature perspective.

Considering from a nurture perspective. By contrast, if one looks at the nurture perspective, other variables determine servant leadership behavior. One variable that Xu et al. (2020) include under the nature perspective is the time or duration that a person occupies a leadership role. In my opinion, this variable should be included in the nurture perspective, since years in leadership role is not a naturally determined personal characteristic that is difficult or impossible to change but is instead equivalent to relevant professional experience in a leadership role, which can be achieved through targeted career planning. For this reason, the finding of Beck (2014) that the variables years in leadership role and hours volunteered (per week) are significantly related to servant leadership is presented in this section. The relationship between emotional intelligence and servant leadership has been subject of further studies. The first study, conducted by Roark and Beuthin (2014), examined leaders from two US companies who have self-rated emotional intelligence and servant leadership. In this study the researchers found a positive correlation between emotional intelligence and servant leadership (cf. Xu et al., 2020). In contrast, a second study by Barbuto, Gottfredson, and Searle (2014) found that emotional intelligence is not a suitable predictor of servant leadership. The researchers collected the data using peer-ratings by employees in

a dyadic design. According to Xu et al. (2020), these contradictory results indicate a need for further research. In a conference discussion, Brouns and Externbrink (2020) presented research showing emotional intelligence as a significant predictor, along with narcissism and compassionate love, that would support Roark and Beuthin's (2014) findings using data from a dyadic research design. Besides emotional intelligence, there are other antecedents that promote servant leadership. The same study that examined the link between narcissism and servant leadership in a sample of CEOs, also examined the link between organizational identification and servant leadership, concluding that leaders with a high level of organizational identification see less disparity between their needs and those of the organization and tend to contribute more to the benefit of others and care about the employees' development and growth (S. J. Peterson et al., 2012). Another important antecedent from the nurture perspective are so-called trickle-down effects, i.e., that the leadership behavior of hierarchically higher leaders has an influence on the leadership behavior of hierarchically subordinate leaders (Xu et al., 2020). Xu et al. (2020) moreover pointed out that this is an antecedent, which is in full agreement with one of the basic tenets of servant leadership as described by Greenleaf (e.g., 1977): The cultivation of service among followers through a process of social learning, i.e., those who are served (by a servant leader) become servants in the course of the process. It has been shown in at least two empirical studies that servant leadership among top level leaders had a positive effect on servant leadership in middle management (Ling et al., 2016; Wang et al., 2018).

2.3.3.3 *Mediators*

In the comprehensive systematic literature review by Eva et al. (2019) many individual constructs were presented, which were examined in empirical studies with regard to the mediating role in the relationship between servant leadership and above discussed various outcomes. In order to better structure the wide range of potential mediators, the research team has divided the various constructs into the following categories (examples of mediator variables in parentheses; Eva et al., 2019):

- Employee and job-centered (empowerment, need satisfaction, commitment, etc.)

- Team-centered (group identification, group citizenship behavior, etc.)
- Leader-centered (trust, LMX, identification with the leader, etc.)
- Climate and organization-centered (trust climate, service climate, etc.)

Even though this categorization offers a starting point to make the broad spectrum of mediators easier to understand and the literature review covers an unprecedented nomological network of the state of research in the field of servant leadership, a clear theoretical foundation remains as potential for future research. This criticism of a lack of a consistent theoretical basis also led to the meta-analysis of Allen Lee et al. (2020), who likewise stated that different alternative pathways were described, which were based on different, partly competing, theories, whereby it ultimately remained unclear which of these theories gave the most consistent explanation for a phenomenon. For this reason, Allen Lee et al. (2020) opted for the more parsimonious model proposed by van Dierendonck (2011), in which two pathways were suggested which explain the influence of servant leadership on positive outcomes at employee and organizational level. The first path involves high-quality leader-follower relationships, i.e., LMX; the second path describes the psychological climate, i.e., fairness and trust (van Dierendonck, 2011). The aim was to further clarify the nomological network without adding further potential mediators to an already highly inclusive network (Allan Lee et al., 2020): At the same time, the researchers followed the call to test competing mediators in a model to disentangle the understanding of the psychological processes behind servant leadership. To this end, the researchers established and meta-analytically tested different structural equation models with the same mediator variables (justice, LMX, trust in the leader) but different outcome variables (performance, creativity, OCB, counterproductive behavior, voice). LMX proved to be the most consistent mediator along the other two mediators, justice and trust, which were not significant for a single outcome variable, namely counterproductive behavior. According to the research team, this result underlines the importance of servant leadership for the development of high-quality leader-follower relationships. Nevertheless, the other mediators were not redundant to LMX, but were also significant mediators of servant leadership, especially trust in the leader had the largest effects on creativity and counterproductive work be-

havior. This meta-analysis subjected the theoretical model of van Dierendonck (2011), who based his work primarily on social exchange and organizational justice theories, to an empirical test over several studies. Allen Lee et al. (2020) further acknowledged the trend towards the emergence of other, alternative theories and subsequent mediators that should be subjected to a comparable analysis to further sharpen the nomological network of servant leadership regarding mediators.

In my point of view, despite the above-mentioned promising research results, it is too early to completely include or exclude certain theories. It has been shown that LMX, as a representative mediating variable for social exchange theory, had significant effects on various outcome variables even in a meta-analytical structural equation model (except counterproductive behavior; Allen Lee et al., 2020). In order to provide practitioners and researchers alike with information on the theories which explain positive and negative correlations between servant leadership and various outcome variables, Xu et al. (2020) have described five theories in more detail, in their interplay with servant leadership: These five theories are the social learning theory (Bandura, 1977b), social exchange theory (Blau, 1964), self-determination theory (Ryan & Deci, 2000a), social identity theory (Tajfel, 1978) and the conservation of resources theory (Hobfoll, 1989), which can be applied in particular to leader-related outcomes. Depending on the outcome variable to be investigated, in this thesis indicators for mental health, namely emotional exhaustion and flourishing, the researcher needs to choose the most appropriate theory for deriving the hypotheses. In the below paragraphs, the five central theories are presented in their interplay with servant leadership, following the theoretical explication and structure of Xu et al. (2020):

Social learning theory and servant leadership. Following Bandura (1977b), social learning processes in social learning theory are described as social inter-individual interactions, i.e., one person can learn from another by one person acting as a salient role model and imitating behavior by the other person. Another way of social learning is that the person perceived as a role model shares their experiences with another person, thus it is possible to learn through so-called vicarious experiences (of the more experienced person), e.g., not to make mistakes again or to reapply successful methods. This process of social learning between

the leader (as a role model) and their employees is more likely for servant leadership than for other leadership theories to occur due to the following key factors (Xu et al., 2020): First, servant leadership is less based on the exertion of positional power than other leadership theories (e.g., transformational leadership); it focuses on serving, which includes e.g., emotional support. This supportive behavior of the leader fulfills the needs of the employees and ultimately leads them to perceive their leader as a natural role model and to spontaneously imitate the behavior of the leader. Second, servant leaders actively support their employees to enable them to realize their personal growth to their full potential, treat all employees with equal dedication and make the interests and needs of their employees their priority. This results in a more intimate relationship, which in turn makes employees more inclined to mimic the leader's behavior, which they themselves perceive as enjoyable and beneficial. Third, servant leaders ensure a successful learning process with their professional and emotional guidance. For example, if the employee experiences setbacks in the learning process, the servant leader shows empathy and tries to bring about emotional healing, which increases the chances of success in the learning process. In this way, employees themselves become servant(s) (leaders) and a serving culture is emerging in the servant leader's sphere of influence (Greenleaf, 1977).

Social exchange theory and servant leadership. The core principle of social exchange theory is reciprocity within social relations, i.e., a mutual give and take between two individuals (Blau, 1964; Cropanzano & Mitchell, 2005). For servant leadership, it can be assumed that the employees are particularly willing to reciprocate because the leader altruistically places the needs and interests of the employees over their own and does the utmost to fulfill them (Xu et al., 2020). From the perspective of social exchange theory, research has shown that both employee trust in the leader is enhanced and high-quality LMX relationships are established, resulting in employees responding with positive behavior and attitudes, such as task performance (Schaubroeck et al., 2011) or OCB, one of the best researched outcome variables of servant leadership (Walumbwa et al., 2010; L.-Z. Wu, Tse, Fu, Kwan, & Liu, 2013), which was supported by a recently published meta-analysis (Allan Lee et al., 2020). What needs to be considered from a theoretical point of view is the conceptual difference between servant leadership and

LMX (Anand, Hu, Liden, & Vidyarthi, 2011): servant leadership emphasizes the unique interests and characteristics of each employee (Liden et al., 2008), which should result in servant leaders striving to build high-quality relationships with all employees. This would be consistent with the assumption that servant leaders set high moral standards by treating all employees equally (Ehrhart, 2004). Nevertheless, Xu et al. (2020) stress that the form of social exchange, which they call “currency”, can vary between individuals, i.e., different resources are provided by the servant leader: Employees who have high skills and high motivation but lack the opportunities to bring these into the organization are provided with the appropriate opportunities by the servant leader. Employees who have skills that have the potential to develop are given the opportunity by the servant leader to develop their skills and grow personally, for example, through targeted training. Furthermore, social exchange theory can serve as an add-on to social learning theory to explain why employees are inclined to adopt behaviors, attitudes and values of servant leaders by interpreting it as reciprocal behavior of the employee towards the leader, servant leadership behavior being modeled by the employee (Liden, Panaccio, et al., 2014; Xu et al., 2020).

Self-determination theory and servant leadership. The already introduced self-determination theory was used as a theoretical basis in research on servant leadership (Xu et al., 2020). This is primarily justified by the basic psychological needs, a core tenet of this meta-theory (Ryan & Deci, 2000a), as it is in line with one of the fundamental principles of servant leadership, namely to give the needs and interests of employees the highest priority and to act in humility and modesty by subordinating one’s own interests to those of the employees. In SDT, the satisfaction of the inborn basic psychological needs for autonomy, competence and relatedness goes along with personal growth, development and well-being (Ryan & Deci, 2000a). Considering servant leadership from a SDT perspective, it is assumed that servant leadership contributes to the satisfaction of basic psychological needs, i.e., the need for autonomy and competence, e.g., through empowering leadership behavior or the interest of the leader to take care of the individual development of each employee in order to unfold their full potential (Chiniara & Bentein, 2016; Panaccio, Donia, et al., 2015). In addition, servant leaders build high-quality LMX relationships with their employees (Allan Lee et al., 2020),

which contributes to satisfying the need for relatedness (Panaccio, Donia, et al., 2015). These examples illustrate why SDT was used as a theoretical framework to explain servant leadership processes. The association between servant leadership and the satisfaction of basic psychological needs could already be shown in different empirical studies (Xu et al., 2020): Van Dierendonck et al. (2014) could show a positive association for servant leadership and fulfillment of basic psychological needs in different research designs (experimental and field study), while at the same time they could show that servant leadership and transformational leadership differ in the mediating pathways, i.e., servant leadership acts via basic need satisfaction and transformational leadership acts via leadership effectiveness on OCB and work engagement. Mayer et al. (2008) showed in a survey study that basic need satisfaction is positively linked to servant leadership and acts as a mediator to job satisfaction. While the above-mentioned studies considered basic need satisfaction as a unitary construct, another empirical study showed that servant leadership has a positive effect on individual needs (autonomy, competence, relatedness) and thus a positive effect on the so-called in-role and extra-role performance of the employee is achieved (Chiniara & Bentein, 2016).

Social identity theory and servant leadership. Social identity theory (SIT) was developed in the late 1970s by Tajfel and Turner (1979) from different theoretical threads of social psychology. One of the central assumptions is that group memberships are self-definitional (Ashforth & Mael, 1989; van Knippenberg & Sleebos, 2006), i.e., the theory assumes that people define themselves not only by their individual characteristics, but also by the qualities and characteristics of the groups to which they belong (Tajfel & Turner, 1979). The former is referred to as personal identity and the latter as social identity (Chughtai, 2016), which influences the behavior of an individual through a sense of shared belonging to a social group (Tajfel, 1978). As described above, a human derives the sense of who he or she is in part from the group to which it belongs. Considering servant leadership from the SIT perspective, an important part of the employees' self-concept is to identify with the servant leader and at the same time to develop a strong sense of identification with their working group led by the servant leader (Xu et al., 2020). This sense of identification with the servant leader, the working group and the organization as a whole, leads to the employee showing behavior that is bene-

ficial to those same stakeholders. Empirical research has shown that organizational identification can be increased through servant leadership behaviors, resulting in positive outcomes for employees, such as voice behavior, work-to-family enrichment, and negative feedback seeking behavior (Chughtai, 2016). In addition, study results showed a positive association between servant leadership and employee group identification, which mediated the relationship between servant leadership and the quality of service delivery by the employee (Z. Chen et al., 2015). Liden, Panaccio, et al. (2014) suggested, comparable to the work of Z. Chen et al. (2015), that employees' group identification mediates the link between a serving culture created by servant leaders and outcomes such as creativity, performance, customer service behavior, etc. Furthermore, on the level of individual relational identification, it was shown that servant leadership increased the employee's identification with the leader and thus enhanced the employee's creativity (Yoshida, Sendjaya, Hirst, & Cooper, 2014).

Conservation of resources theory and servant leadership. Finally, servant leadership is examined from the perspective of COR theory. Even though this theoretical path has not yet been broadly empirically followed (e.g., C. Liao et al., 2020), a COR perspective is valuable, especially for the analysis of the effects of servant leadership on the leader itself (Xu et al., 2020). The fundamental idea of COR theory is that individuals engage in preserving and protecting resources, so that they conserve resources (Hobfoll, 1989; Hobfoll et al., 2018): However, people are confronted with many situations that can consume resources. Likewise, there are opportunities in which people can also gain and accumulate resources by investing resources. In the former case of resource losses, the protection mechanism for the remaining resources is intended to ensure that the "resource account" is kept balanced. Xu et al. (2020) argued that a COR perspective on servant leadership is valuable and appropriate to explain the effects of servant leadership on the servant leader. In doing so, they followed the theoretical considerations of Liden, Panaccio, et al. (2014), who assumed that servant leadership depletes the leader's resources on the one hand and that servant leadership also has the potential to gain psychological resources, e.g., through leader's self-actualization (van Dierendonck, 2011), on the other hand. The look from the perspective of COR theory, which describes the central mechanisms of resource loss and resource

gain, can help servant leadership research to gain a balanced insight into the effects of servant leadership engagement on leaders (Xu et al., 2020).

2.3.3.4 Moderators

As with the mediators of servant leadership, many variables were presented in the extensive systematic literature review by Eva et al. (2019) regarding their moderating effect on the relationship between servant leadership and different outcomes. In order to better structure the wide range of potential moderators, the research team has divided the different constructs into the following categories (examples of moderator variables in parentheses; Eva et al., 2019):

- Employee and job-centered (positive reciprocity beliefs, personal dispositions like personality, etc.)
- Team-centered (team power distance)
- Leader-centered (gender, trust, LMX, etc.)
- Organization-centered (organizational structure, organizational climate, etc.)

Regarding the organizational and team-based results, the authors of the systematic literature review indicated these results should be interpreted with caution, as these moderators (e.g., team or organizational climate) are often based on individual ratings of employees that were not mapped in a multi-level model (Eva et al., 2019).

Xu et al. (2020) have categorized moderators slightly differently. They combined team- and organization-centered into contextual characteristics and named the other two categories differently: follower and leader characteristics. In the following, in reference to Xu et al. (2020), leader, follower and contextual characteristics are presented that have a moderating effect, whether positive or negative, on the relationship between servant leadership and various outcome variables:

Moderating role of leader characteristics. This section considers further characteristics of the leader regarding their influence on positive or negative outcomes of servant leadership, whereby the sex of the leader, which was already critically debated in the antecedents' section, should also have a moderating effect. In one study it could be shown that the gender of the leader influences the relationship

between servant leadership and agency problems in such a way that this relationship is more negative for female leaders than for male (Politis & Politis, 2018): The authors of the study argued women are more ethical and are less likely than their male colleagues to engage in high-risk financial matters. At the same time, they insisted these findings should be interpreted with caution and not generalized, as they collected the sample in Cyprus during the financial crisis and as more women than men in the sample rated male leaders. In another study it was shown that the political skills of a leader had a positive effect on the relationship between servant leadership and workplace spirituality (Williams, Brandon, Hayek, Haden, & Atinc, 2017). Williams et al. (2017) argued that servant leaders with high political skills are good at building and maintaining social networks, recognizing, and interpreting different social situations to adjust their behavior and thus are equipped with the necessary resources to promote workplace spirituality. Furthermore, a study has shown that organizational embodiment can strengthen the trickle-down effect of servant leadership at different levels (Wang et al., 2018). Organizational embodiment is understood as the degree to which a follower experiences the leader as entrenched with and impersonating the organization (Eisenberger et al., 2010). The trickle-down effect and the strengthening of this effect through organizational embodiment were shown for the relationship between high-level leader servant leadership and low-level leader servant leadership, as well as for the relationship between the serving behavior of low-level leaders on in- and extra-role performance of their frontline employees (Wang et al., 2018). The trickle-down effect of servant leadership was explained by social learning theory, i.e., via the different hierarchical levels (high- and low-level leader, and low-level leader and employee) the behavior of the hierarchically superior individual is imitated by the hierarchically inferior individual (ibid.). One can ask why is organizational embodiment from a theoretical point of view to be regarded as moderator? The more deeply a leader is embodied in the organization, the more likely the leader is to have status, competence, and power, which, as a cue, results in the leader being seen as a salient role model (ibid.). Organizational embodiment of the leader also signals to the employees that the leader's behavior is likely to be in line with the norms and values of the organization, which makes it appropriate to imitate the behavior of the leader in order to establish congruence with the norms and values of the organization (ibid.).

Moderating role of follower characteristics. Compared to the moderating role of leader characteristics, there is significantly more research on follower characteristics (Xu et al., 2020). For this reason, I decided to structure the different moderators on the follower side according to the theories behind these characteristics. Following Xu et al. (2020), theories include implicit leadership theories (Epitropaki & Martin, 2004; Epitropaki, Sy, Martin, Tram-Quon, & Topakas, 2013; Lord et al., 1984), substitutes for leadership theory (Kerr & Jermier, 1978), LMX, attribution theory (Heider, 1958; Kelley, 1967, 1973; B. Weiner, 1985), and social exchange theory (Blau, 1964; Cropanzano & Mitchell, 2005):

Implicit leadership theories are stored in a person's memory and comprise prototypes or cognitive structures that specify characteristic abilities and traits of leaders (Epitropaki et al., 2013): Implicit leadership theories are triggered when employees interact with leaders and provide a cognitive basis for their reactions to and understanding of leadership behavior. If a particular repertoire of leadership behavior is congruent with the employee's implicit leadership theories and the ideal leadership prototype, the employee will react positively to the leader and his or her behavior. Failing this, the employee will show a negative reaction to the leader and his or her leadership behavior. Based on these theoretical findings, it is conceivable that servant leadership is undesired and may be detrimental to certain employees. Implicit leadership theories are one of the most widely used theories since these prototypes of an ideal leader are salient employee characteristics which can account for moderating effects on relationships between servant leadership and outcomes (Liden, Panaccio, et al., 2014; Panaccio, Donia, et al., 2015). Empirical research has provided initial support for this, e.g., it could be shown that servant leadership led to reduced OCB and lower task performance if employees' desire for servant leadership was low (Meuser, Liden, Wayne, & Henderson, 2011). Another study showed that for employees whose ideal leadership prototype was congruent with servant leadership, servant leadership was associated with reduced leadership avoidance (Lacroix & Pircher Verdorfer, 2017). Also based on implicit leadership theories, Donia et al. (2016) argued that interindividual differences in followers' motives can be another moderating factor: More specifically, they assumed the positive relationships between servant leadership and job satisfaction, and between servant leadership and OCB to be moderated by prosocial values level and the degree to which an impression man-

agement motive is expressed. They deduced from the implicit leadership theory that those employees with high prosocial values and a low impression management motive have an ideal leadership prototype that comes close to the nature of servant leadership. Even though the empirical part of their study could only show that the impression management motive has a moderating effect on the relationship between servant leadership and job satisfaction, this is an indication that motives which have an impact on employees' implicit leadership theories play an important role in understanding the effects of servant leadership.

Based on the substitutes for leadership theory (Kerr & Jermier, 1978) it was argued that extraversion, as a personality trait of the employee, and collectivism can substitute the positive effect of servant leadership on psychological contract fulfillment (Panaccio, Henderson, et al., 2015): Extraverted employees are outgoing and therefore better able to build a professional network than introverts. Collectivists, compared to individualists, make more effort to build and maintain relationships with their colleagues. Therefore, the two characteristics are obviously related and lead to the development and maintenance of good relationships and the emergence of a social (professional) network that has the potential to support the fulfillment of psychological contracts and therefore these individuals are less dependent on servant leadership. Extraversion and collectivism substitute (servant) leadership regarding the fulfillment of psychological contracts. Moreover, the study by Panaccio, Henderson, et al. (2015) included another moderator variable, namely proactive personality, i.e., employees who are inclined towards taking initiative to improve their situation in their own interest. Here, too, the assumption was that employees with a proactive personality weaken the relationship between servant leadership and psychological contract fulfillment, i.e., are also a substitute for leadership. However, the researchers found no support in the data for their hypothesis.

Looking through the lens of LMX theory, studies have shown that servant leadership influences employees with proactive personalities more strongly than other employees (Newman, Schwarz, Cooper, & Sendjaya, 2017; Rodríguez-Carvajal, Herrero, van Dierendonck, de Rivas, & Moreno-Jiménez, 2019). This is the case because LMX relationships with the leader of high quality are mostly developed by proactive personalities, as their proactive behavior makes them more likely to use opportunities and benefits that servant leaders offer them

(Newman et al., 2017). Newman et al. (2017) could show that proactive employees who were led by a servant leader showed stronger extra-role and organizational citizenship behavior. On a theoretically similar basis, Rodríguez-Carvajal et al. (2019) were able to show that employees' proactive personality could strengthen the relationship between servant leadership and experienced meaningfulness in life.

A perspective of social exchange also appears valuable for the analysis of moderators in the research field of servant leadership (Xu et al., 2020). The basic assumption is that employees show positive behavior towards their leader in order to return appropriate social exchange for the servant behavior of the leader, although this assumption is not always valid in practice: Research by Zou, Tian, and Liu (2015) and L.-Z. Wu et al. (2013) has shown that employees with high reciprocity beliefs or high sensitivity to favorable treatment by others are more apt to establish high-quality LMX relationships with servant leaders than those employees with low values of these moderator variables.

According to attribution theory (Heider, 1958; Kelley, 1967, 1973; B. Weiner, 1985), the employee's reactions to servant leadership are influenced by the reason why a leader shows servant leadership behavior (causal attribution). A recent study has shown that servant leaders are not necessarily appreciated by their employees (Sun, Liden, & Ouyang, 2019): When an employee causally attributed servant leadership behavior to a high-quality LMX relationship with their leader, the employee is less appreciating the leaders' servant behavior. However, if the employee did not causally ascribe the servant leadership behavior to the high-quality LMX relationship, the servant leadership behavior would be perceived as unexpected, leading to higher gratitude by the employee.

Furthermore, additional moderators of servant leadership were investigated. It was demonstrated, for example, that employees' organizational tenure weakens the positive relationship between servant leadership and trust in the leader and job satisfaction (S. C. H. Chan & Mak, 2014): This is due to the fact that employees with shorter tenures are more motivated to contribute to the organization and have a greater interest in personal career development than colleagues with longer tenures. This in turn leads to these employees being more likely to build trust in their leader and to have a high level of job satisfaction, as they are served by a servant leader. Furthermore, employees' trust in their leader was also

identified as a moderator variable, promoting, for example, the relationship of servant leadership to trust and ethical responsibility as ethical work climate dimensions (Jaramillo, Bande, & Varela, 2015).

Moderating role of contextual characteristics. Besides leader and follower characteristics, there are also contextual characteristics which have a moderating effect on the relationship between servant leadership and different outcomes. These contextual characteristics will be outlined in the following, based on the systematic literature review by Xu et al. (2020):

As uncertainty stimulates negative emotions in people, they strive to reduce feelings of uncertainty as much as possible, for which there are different strategies (cf. van Dierendonck et al., 2014): On the one hand, people seek to connect with social groups in times of uncertainty, as they offer security, resources and support (Hogg, 2007). On the other hand, in times of uncertainty, people look for leaders with unconventional measures, charismatic personalities and heroic traits, as these people have the potential to accompany them through times of crisis (Choi & Mai-Dalton, 1998). As people, in times of uncertainty, focus less on satisfying personal (psychological) needs and more on the needs of social groups and servant leaders do not stand out due to unconventional measures and a heroic personality, a servant leader seemed less effective in this context (van Dierendonck et al., 2014; Xu et al., 2020). Based on these theoretical considerations, van Dierendonck et al. (2014) have conducted a number of empirical studies to determine whether servant leadership, combined with environmental uncertainty, results in less satisfaction of employees' psychological needs and leadership effectiveness. The three conducted studies came to contradictory results, which led the authors to summarize the results with a pun: "We conclude that our findings regarding the moderation of environmental uncertainty are uncertain at best" (van Dierendonck et al., 2014, p. 559).

Furthermore, the organizational climate, which can take various forms, e.g., ethical climate, justice climate and service climate (Kuenzi & Schminke, 2009), also plays a moderating role in servant leadership research (Xu et al., 2020). Ling et al. (2016) proposed a model that service climate for both top-level and middle-level servant leaders would result in a strengthening of the positive relationship between servant leadership and employees' service-oriented behavior. They ar-

gued that a pronounced service climate complements the servant behavior of the leader (in the service sector) and thus the strategic focus is on providing high-quality services (Ling et al., 2016). In their empirical multi-level model, they found support for their hypothesis that a strong service climate strengthens the link between middle-level servant leadership and employees' service-oriented behavior. Surprisingly, however, for top-level servant leadership the same effect is weakened by a strong service climate, which the authors ascribe to the greater hierarchical distance between top-level leaders and employees. From this perspective, it seems logical for a high service climate to function as a substitute for servant leadership at the top level, since this level already provides behavioral guidelines that are oriented toward high service quality. Organizational ethical climate, particularly the caring dimension, which reflects the degree to which members of an organization care about the welfare of others in their decisions and actions, was further considered being a moderator of servant leadership (Schwepker & Schultz, 2015): The researchers argued and could empirically show that the positive association between servant leadership and customer value enhancing sales performance of salespeople is strengthened by a caring ethical climate, as salespeople are provided with consistent cues from leaders and organizations about the importance of helping others. Brouns (2019) has also shown that an ethical organizational climate increases the leaders' tendency to show servant leadership behavior by demonstrating that the relationship between leaders' agreeableness and servant leadership is strengthened by a high ethical organizational climate. This in turn underlines the fact that coherence between environment and behavior is important for the emergence and effectiveness of servant leadership.

The organizational structure as a contextual moderator was a further subject of research (Neubert et al., 2016). The organizational structure was described as being on a continuum between mechanistic and organic structure (Donaldson, 1996): Mechanistic structures are characterized by a high degree of formalization, e.g., by rules, regulations and procedures, which regulate how the entities behave towards each other, how decisions are made or how tasks are to be performed. In contrast, organic organizational structures are more flexible, hierarchically flatter and less rule-led (*ibid.*), which is more in line with the goal of servant leadership, namely, to develop the employees' full potential through empowerment and

support (Neubert et al., 2016). Empirical research has shown that servant leadership can promote both employees' creativity and job satisfaction, furthermore less structured, organic organizations can strengthen this relationship (ibid.).

In addition to the moderators mentioned above, the team or group power distance, a construct which measures power distance at team level, i.e., the shared values of team members that authorities must be respected and that these authorities can legitimately prescribe actions to hierarchically subordinate persons (Jixia Yang, Mossholder, & Peng, 2007), was proposed as a moderator of servant leadership (Jin Yang et al., 2017). More specifically, Jin Yang et al. (2017) examined whether the positive relationship between servant leadership and team effectiveness is weakened by team power distance. In their empirical data, the researchers found support for their hypothesis and assume that a high team power distance leads to team members being more inclined to follow team routines, resulting in less interaction with the leader. These reduced interactions with the leader result in the leader being perceived as less effective, which also weakens trust in the team's capabilities.

2.3.3.5 *Nomological Network*

Based on the broad theoretical foundation on the one hand and the international empirical evidence on the other hand, different author teams have meanwhile developed an integrative summary or a nomological network for servant leadership (Eva et al., 2019; Xu et al., 2020). This approach to the nomological network includes the previously described areas of antecedents, mediators, moderators, and outcomes (at various levels). The following figure 21 shows the nomological network of servant leadership, based on Xu et al. (2020), and is intended to provide a simple view of the complex phenomenon of servant leadership. Such an overview always has a simplifying character and thus the complexity of a phenomenon cannot be represented in all its facets. Nevertheless, I am convinced that such an "overall view" makes the field of research, especially for non-experts, more tangible.

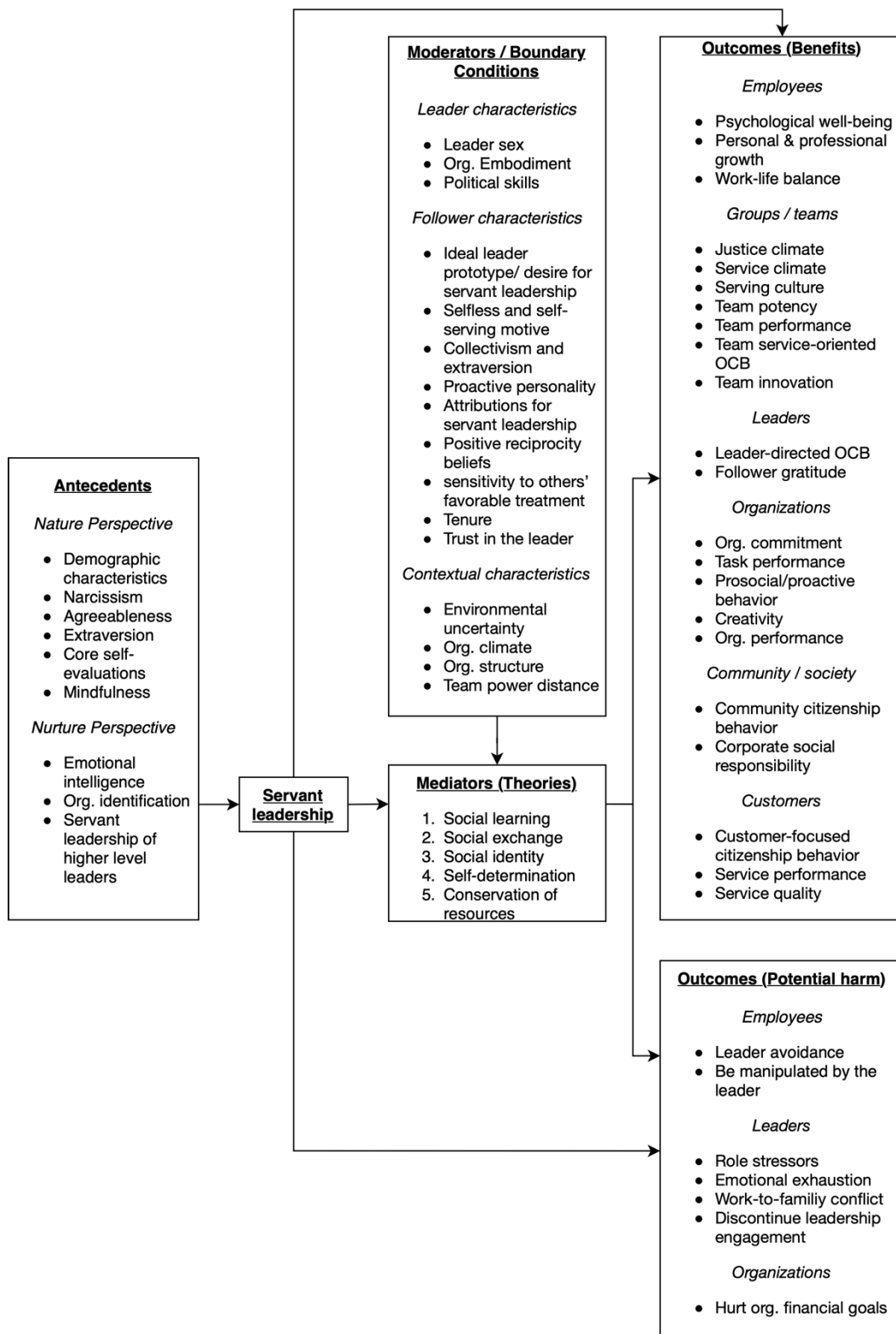


Figure 21: Nomological Network of Servant Leadership According to Xu et al. (2020, p. 48)

3 EMPIRICAL FINDINGS ON LEADERSHIP AND MENTAL HEALTH

“Reality provides us with facts so romantic that imagination itself could add nothing to them.”

Jules Verne, Novelist & Poet

3.1 LEADERSHIP AND FOLLOWERS’ MENTAL HEALTH

On a follower level, the next two chapters describe (1) which leadership behavior nourishes the resources of employees and which normative leadership theories are health-promoting, and (2) which leadership behavior stresses employees and which leadership styles are health-impairing. The following figure 22 shows the general dichotomy between leadership as resource and leadership as stressor. The following chapters are structured according to this logic.

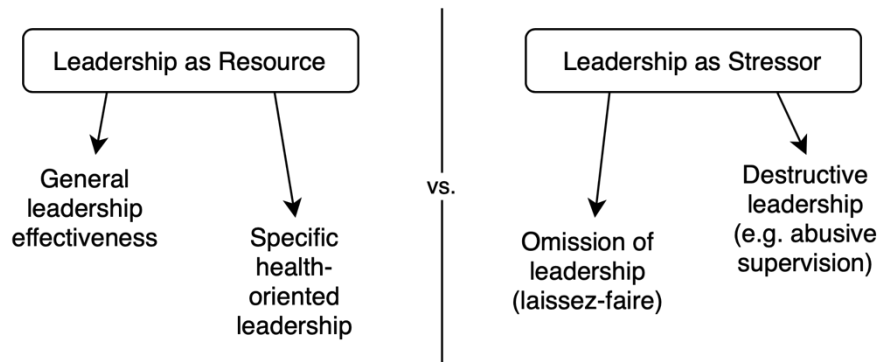


Figure 22: Leadership and Employees’ Mental Health According to Gregersen et al. (2011)

3.1.1 Health-promoting Leadership Behavior

Leadership as resource. Different psychological constructs were examined as health-promoting resources in the leadership context. Gregersen et al. (2011) pro-

vide a good overview of this topic. The employee's opportunities for co-determination and participation in the work context decreased the rate of absenteeism at work (K.-H. Schmidt, 1996). Appreciation and recognition of the employee by the leader also had a positive effect on the work ability and mental health of the followers (Moreno-Abril et al., 2007; Tuomi et al., 1998). Perceived justice at work was also associated with low levels of physical illness at work (Kivimäki et al., 2005). In her study, Blegen (1993) found that, among other variables, the communication behavior of leaders had an effect on job satisfaction.

The broadest and most profound evidence, however, is for social support by the leader. Gregersen et al. (2011) analyzed 16 articles that used different research designs, longitudinal, cross-sectional and review, to investigate the effects of social support by leaders. In the studies considered, both direct and indirect mediated links and moderating effects were examined (Gregersen et al., 2011). For example, negative links for social support by leaders and absenteeism (e.g., Firth & Britton, 1989), perception of stress (e.g., Hyde, Jappinen, Theorell, & Oxenstierna, 2006), and positive links with job satisfaction (e.g., Gelsema et al., 2006) and mental health (e.g., Stansfeld, Fuhrer, Head, Ferrie, & Shipley, 1997) were found. In a longitudinal study Dormann and Zapf (1999) revealed that low social support increased the effect of social stressors, which in turn led to depressive symptoms. What was remarkable about the findings of Dormann and Zapf (1999) was that in a context of high social support from the leader, even with an increase in social stressors, there was a decrease in depressive symptoms. However, this effect could only be measured with a time lag of eight months, but not at earlier or later measurement points in the study.

In summary, it can be stated that first and foremost, social support by the leader was researched as a resource and substantiated with empirical evidence, whereby direct and indirect effects were considered (Gregersen et al., 2011). Furthermore, as described above, other potential constructs were examined as a resource (ibid.).

Different leadership theories and employees' mental health. In general, there are consistent findings on the connection between leadership behavior and mental health, as a positive conceptualization, and mental illness or ill-health in the organizational context (Kelloway & Barling, 2010).

In one of the first meta-analyses on the connection between leadership behavior and employee health, 27 studies were analyzed (Kuoppala, Lamminpää, Liira, & Vainio, 2008): Different leadership theories (considerate, supportive and transformational leadership) were associated with improved job-related well-being, e.g., measured by low stress, anxiety and depression. In addition, positive leadership was associated with objective measures such as disability pensions and sick leave.

In their systematic review, Skakon, Nielsen, Borg, and Guzman (2010) considered not only dedicated leadership behavior and the relationship between employee and leader, which is described in more detail by the LMX (e.g., Graen & Uhl-Bien, 1995), but also specific leadership styles with regard to their association with health-related constructs in the organizational context. They pay special attention to the theory of transformational leadership, which includes laissez-faire leadership and transactional leadership in the sense of the full range of leadership model (Bass & Riggio, 2006). The results of their research showed that positive leadership behavior, support from the leader, and transformational leadership were positively associated with affective well-being and negatively associated with employee stress (Skakon et al., 2010). Furthermore, they found limited support for the hypothesis that stressed leaders are also stressful for the employees, assuming that this is triggered by negative leadership behavior caused by leaders' strain.

Further findings, in agreement with Skakon et al. (2010), are provided by the analysis of the current state of research by Gregersen et al. (2011). Based on the studies analyzed, they generally assume a health-promoting effect of specific leadership styles, in particular transformational leadership, and to a lesser extent also transactional leadership, which in addition to relationship-oriented leadership behaviors had a positive effect on health-related outcomes. They also found a positive correlation for LMX, even if only based on one single study.

A further meta-analysis on leadership and mental health of employees was conducted by Montano, Reeske, Franke, and Hüffmeier (2017). The special feature of this meta-analysis is that a holistic understanding of health, in the sense of the two continua model used in this thesis, was applied and, in addition, mental health was analyzed as a mediator for job performance. Well-being and psychological functioning were used as indicators of mental health. As indicators for

mental illness or ill-health burnout, stress, affective symptoms, and health complaints were utilized. The results of the study showed that transformational leadership, along with high-quality task- and relational orientation and LMX were positively associated with mental health. Destructive leadership behavior was, as expected, negatively linked to mental health of employees. The researchers were not only able to show in their meta-analytical regression that there were significant correlations between leadership behavior and leadership styles and employees' health outcomes, but also to prove the assumed direction of the effect. Furthermore, they found partial support for their mediation model, which assumed mental health as a mediator between leadership behavior and job performance. This in turn has the implication that mental health status of an organization's employees has a significant impact on its performance and productivity. Therefore, the researchers of this study conclude that leadership, in addition to its function of achieving an organization's strategic goals, has an important value for OHP, as leadership can influence the health of employees in both a positive and negative sense.

Even though van Dierendonck, Haynes, Borrill, and Stride (2004) did not examine a specific leadership style, they were able to show in their longitudinal study that leadership behavior (measured in this study by nine subscales, including giving feedback, coaching and support, communication, etc.) is positively related to employees' well-being. They also found that employees' positive well-being had a positive effect on leadership behavior, suggesting a bi-directional process between leader and employee, which they called feedback loop.

In their systematic literature review, Parris and Peachey (2013) found vigorous support for the assumption that servant leadership has a positive impact on the well-being of employees. However, only a small subset of the studies analyzed have provided concrete measurements of health-related variables. Most of the studies examined related constructs such as work climate, organizational commitment, job satisfaction, etc., which only serve as a proxy for mental health (for a complete list of the studies refer to Parris & Peachey, 2013).

C. Y. Chen, Chen, and Li (2013) showed that autonomous motivation acts as a mediator between servant leadership and eudaemonic well-being. They used self-determination theory for their theoretical deduction of the hypotheses and the construction of the structural model. They argued that the servant leader cre-

ates a positive working environment which empowers employees to develop higher goals, which promotes the internalization of goals and results in autonomous motivation, ultimately leading to higher eudaemonic well-being. Furthermore, C. Y. Chen et al. (2013) showed that servant leadership explains 5.2-9.9% variance in autonomous extrinsic and intrinsic motivation beyond transactional leadership.

In their diary study, Rivkin et al. (2014) examined the influence of servant leadership on long-term (emotional exhaustion and depersonalization) and short-term (need for recovery and ego depletion) indicators of stress. They based their theoretical reasoning on both organizational fit theory (Caplan, 1983) and social identity theory (Tajfel & Turner, 1979). By integrating both theories, Rivkin et al. (2014) argued that the servant leader can create a work environment that improves the needs-supply fit at the dyadic level, and at the group level the servant leader provides mutual support, trust, and a sense of social belonging by cultivating a shared social identity. The results of the studies suggested that servant leadership is negatively associated with long- and short-term stress indicators and that this association may even explain additional variance beyond established job stressors such as job ambiguity and emotional dissonance. Using a multi-method approach, the researchers also concluded that the relationship between servant leadership and positive mental health of employees is generalizable, robust, and stable.

Coetzer et al. (2017a) provided further empirical evidence that servant leadership can have a positive impact on employees' mental health. They have developed a model that assumes that servant leadership strengthens certain work-related resources, such as organizational support, supervisory support, and job clarity, and that it has a negative impact on burnout. The authors could not find a direct relationship between servant leadership and burnout. They based their theoretical explanation for the mediation model on the JD-R model (Demerouti et al., 2001; Schaufeli, 2015). They argued that servant leadership either provides job resources that buffer high job demands that would normally be a trigger for burnout or provides job resources that enable employees to recover from burnout symptoms faster (Coetzer et al., 2017a). Babakus, Yavas, and Ashill (2011) came to comparable results in their study, even finding a significant direct effect of servant leadership on burnout.

Summary of the literature on health-promoting leadership behavior. In conclusion, there is already broad meta-analytical evidence on the relationship between leadership styles and mental health of the employee (Gregersen et al., 2011; Kuoppala et al., 2008; Montano et al., 2017; Skakon et al., 2010). Special attention has been paid to transformational leadership, but initial studies have also been conducted on the health outcomes of servant leadership. Nevertheless, the questions of how, when and why have not yet been answered in detail. C. Y. Chen et al. (2013) provided the first empirical findings that variables from the spectrum of self-determination theory have a mediating effect on the well-being of employees. Rivkin et al. (2014), on the other hand, based their hypotheses that servant leadership leads to psychological health of employees on organizational fit theory and social identity theory. Conversely, other studies have used proven OHP models (Schaufeli, 2004), such as the JD-R model, to explain the relationship between servant leadership in symptoms of burnout (Coetzer et al., 2017a).

In this thesis, the hypotheses on mediators and moderators in the relationship between servant leadership and mental health are also derived theoretically. This will be done in the hypothesis development of the corresponding chapters of the individual studies. In addition to the focus on the mental health of employees in the workplace, this thesis also includes the leader level, i.e., it is also researched how servant leadership affects the leader itself.

3.1.2 Health-impairing Leadership Behavior

Leadership can have both positive and negative consequences for the mental health of employees and leaders. The previous chapter presented empirical findings on behaviors and leadership styles that have a positive effect on employees' mental health. In contrast, in this chapter, leadership behavior that impairs the mental health of employees, is presented. To this end, I will continue to use the structure introduced previously (Gregersen et al., 2011). This means that in comparison to the previous chapter, leadership is considered a stressor, not a resource. Subsequently, leadership theories or leadership styles are presented, which have negative consequences for the mental health of employees.

Leadership as stressor. Besides the positive consequences of leadership, Gregersen et al. (2011) also evaluated leadership as a stressor. They analyzed four studies and concluded that leadership-related stressors have a negative impact on employees' health, which also includes emotional exhaustion. They further found negative consequences for employees' satisfaction and organizational measures such as absenteeism and long-term absences. Specifically, the following stressors were identified: Impatience of the supervisor (Firth & Britton, 1989), conflicts with the supervisor (Vahtera, Pentti, & Uutela, 1996) and the way in which differences of opinion are resolved (Hyde et al., 2006). Insulting behavior in sense of abusive supervision by leaders was also mentioned as potential stressor (Tepper, 2007). The latter was conceptualized in the literature as part of a destructive leadership "style" (Schyns & Schilling, 2013).

Laissez-faire and destructive leadership and employees' mental health. In contrast to the previous conceptualization of leadership styles or normative leadership theories, which have a positive orientation towards the development of moral values and ideas, leadership styles which have a negative effect on the health of employees are understood as destructive leadership (active) and non-leadership or laissez-faire leadership (passive).

The findings on laissez-faire leadership, i.e., the omission of leadership behavior, have so far been inconsistent. Two meta-analyses, which also included a small number of studies on laissez-faire leadership, came to this conclusion (Gregersen et al., 2011; Skakon et al., 2010). In their study, Rowold and Schlotz (2009) were able to show that laissez-faire leadership increased employees' perception of stress. Furthermore, negative correlations between non-leadership and outcomes such as work performance, motivation and job satisfaction were shown (Judge & Piccolo, 2004). These constructs of work and organizational psychology also have an influence on mental health variables. Other studies even argue that laissez-faire leadership should not be understood as zero- or non-leadership but should also be seen as destructive leadership behavior (Skogstad et al., 2007). In this study, the researchers developed a partial mediation model, which showed that laissez-faire leadership leads to bullying via role stressors (role conflict, role ambiguity) and conflicts with work colleagues, which ultimately results in distress. Furthermore, it was shown that passive-avoidant leadership has a signifi-

cant relationship to two dimensions of burnout, emotional exhaustion and cynicism (Hetland et al., 2007). Another study, which also examined the connections between laissez-faire leadership, i.e., passive-avoidant leadership, and burnout, came to comparable results: not leading resulted in employees' emotional exhaustion (Kanste, Kyngäs, & Nikkilä, 2007). This association between laissez-faire leadership and dimensions of burnout was also shown in later studies (Zopiatis & Constanti, 2010). Another study, conducted in Sweden with more than 5,000 participants, also showed positive correlations between avoiding leadership, referred to as non-listening leadership in this study, and emotional exhaustion and depressive symptoms (Theorell et al., 2012). This effect could be shown over a period of two years in a longitudinal study design. In addition to non-listening leadership, the researchers also measured self-centered leadership, which was captured by the items non-participating, asocial, and loner. This can also be understood as a narcissistic form of leadership (Bildat & Torcka, 2019). In Theorell et al.'s (2012) study, self-centered leadership has also shown positive correlations with the outcome variables. The effects for self-centered leadership remained significant even when demographic variables and job conditions, in this case, requirements and decision latitude, were controlled. The result for non-listening leadership was no longer statistically significant when job conditions were included in the model alongside demographic variables.

Other studies, however, have not been successful in showing substantial significant correlations in the relationship between laissez-faire leadership and mental health of employees (Mazur & Lynch, 1989; Sosik & Godshalk, 2000). Even if the results do not unanimously show that non-leadership leads to negative health consequences for employees, it is nevertheless significant what effect leaders have in their formal role, even or especially when they are passive and do not act. Skogstad, Nielsen, and Einarsen (2017) concluded that the empirical evidence for positive effects of passive-avoidant leadership on emotional exhaustion and thus on employees' mental health is relatively strong. However, they note that the effect sizes of these relationships are smaller than those of active destructive leadership, such as abusive supervision (Skogstad et al., 2017). A possible explanation why the studies come to inconsistent results is provided by Schyns and Schilling (2013) in their definition of destructive leadership. They contradict Skogstad et al. (2007) in their view that laissez-faire leadership is destructive leadership behavior

and criticize it as too broad and blurred. Laissez-faire leadership is ineffective in satisfying employees and promoting their job performance, but there is a definite difference in quality between laissez-faire leadership and active hostility by the leader, such as abusive supervision or petty tyranny (Schyns & Schilling, 2013). Especially the latter is likely to have much worse consequences than laissez-faire leadership. Nevertheless, after reviewing the relevant literature, it should be acknowledged that the empirical evidence for a significant correlation between laissez-faire leadership and the impairment of employees' mental health outweighs the studies that could not show any effects.

As mentioned at the beginning, the bad, dark sides of leadership are basically divided into actively destructive and passively avoiding behavior. After the state of research on passive-avoidant leadership, i.e., laissez-faire leadership, has been presented, the active side, destructive leadership, is outlined. Herscovits and Barling (2009) investigated in their meta-analysis the effect of aggression at the workplace on attitudinal, behavioral, and health-related, e.g., emotional exhaustion and depression, outcomes at the employee level. In their analysis, they distinguished between those who exerted the aggression, namely leaders, co-workers, and also outsiders. Aggression of the leader had a significantly stronger influence on behavioral and attitudinal outcomes than aggressive actions of co-workers, while aggression of co-workers had a significantly stronger negative influence than aggression of outsiders. This is comparable to a cascade from the inside to the outside: Aggression from within, in a power imbalance, has the greatest negative influence on behavioral and attitudinal variables, such as job satisfaction, affective commitment or work performance. For most health-related variables, except psychological distress, no significant difference between the different sources of aggression could be shown. One possible explanation was that the source of aggression is not a relevant moderator of non-organizational focused outcomes such as well-being. Therefore, it is not important in this case who is exerting the aggression, since the victims generally perceive it as a stressor, which ultimately leads to personal psychological strain.

In addition, Skakon et al. found two studies in their 2010 meta-analysis, which explicitly addressed the effect of abusive supervision on mental health at work. One study investigated the relationship between abusive supervision and supportive supervision on the different dimensions of burnout (Yagil, 2006): It

was found that both emotional exhaustion and depersonalization, two of the three dimensions of the burnout construct, were increased by abusive supervision. Supportive supervision showed a positive correlation for personal performance. In a further study, Wu and Hu (2009) examined whether abusive supervision is associated with emotional exhaustion. They additionally analyzed whether co-worker support and susceptibility to emotional contagion have a moderating influence on this relationship. Abusive supervision was positively related to emotional exhaustion, although this relationship was stronger when there was a high level of co-worker support and when employees were highly susceptible to emotional contagion. Wu and Hu (2009) interpreted this counterintuitive result that social support by co-workers reinforces the effect with the so-called ceiling effect. The ceiling effect states that the baseline stress level of people who do not receive support from co-workers is higher than the stress level of people who receive co-worker support.

In the meta-analysis by Schyns and Schilling published in 2013, destructive leadership was associated with different outcomes. They structured the outcomes into different categories: leader-, job-, and organization-related, such as attitudes towards the leader, job satisfaction and justice as well as individual follower-related concepts, like stress and well-being, to name just a few (Schyns & Schilling, 2013). They found many studies in the literature research that dealt with destructive leadership and outcomes of OHP. It is worth mentioning that to some extent the two continua of mental health at work were considered, as both studies on stress and well-being, as a positive concept of OHP, were included. Even though the number of studies on stress was significantly higher, the call by Schaufeli (2004) to introduce a health model instead of a disease model was heard, since there are also studies on positive constructs such as well-being (Schyns & Schilling, 2013). The highest correlations of destructive leadership were analyzed for attitudes towards the leader and counterproductive work behavior. Among other effects, a negative correlation could be found for well-being and a positive correlation for stress with destructive leadership, which shows that leadership behavior goes beyond work-related variables. In general, the construct of abusive supervision (Tepper, 2000) was the predominant measure used in the study included in this meta-analysis, besides, e.g., petty tyranny. It was remarkable that abusive supervision showed higher correlation coefficients to personal

constructs such as well-being and affectivity than other forms of destructive leadership. Schyns and Schilling (2013) speculated that the reason why this occurred might have been the content of the items: The abusive supervision scale had a stronger personal connotation compared to the other scales, whereas the other scales had a stronger work relatedness. Furthermore, they hypothesized and tested whether destructive leadership generally has greater effect sizes on the various categories of outcome variables than constructive leadership, such as transformational leadership and LMX. They compared the results of their meta-analysis with the results of other meta-analyses (e.g., Judge & Piccolo, 2004; Kuoppala et al., 2008), which put constructive leadership theories in connection with the different outcome variables. The results of this comparison were mixed, with most coefficients of constructive leadership being higher, except for well-being and commitment. In the end, they concluded that destructive leadership has far-reaching effects, even in the personal lives of the employees. This was shown by positive correlations to follower-related constructs such as occupational stress and negative affect as well as a negative correlation to well-being. Due to the research design of the included studies, they cannot draw any causal inferences, since, e.g., occupational stress can also lead to a higher perception of destructive leadership.

In their meta-analysis, Zhang and Liao (2015) also examined effects of abusive supervision on employees' well-being in addition to employees' attitudes, perceptions of organizational justice, performance, workplace behaviors and family-related outcomes. For work performance and work behavior, power distance (in North America and Asia) was identified as a significant moderator. While social exchange theory (Cropanzano & Mitchell, 2005) is often used to explain the relationship between abusive supervision and various outcomes, here, for the association of abusive supervision with well-being, the COR theory (Hobfoll, 1989) was used. According to this theory, stress is triggered by the threat or actual loss of resources, which affects the well-being of employees. For example, abusive supervision can deplete the psychological resources of employees, which means that fewer resources are available to cope with stress (Zhang & Liao, 2015). Permanent exposure to abusive supervision can have a lasting effect on well-being. Zhang and Liao (2015) argued further that abusive supervision leads to a "socially noxious environment" (p. 963) that causes chronic stress. This permanent stress finally leads to physical problems like insomnia (Rafferty, Restubog, &

Jimmieson, 2010). Besides correlations of abusive supervision with anxiety and anger, which can lead to psychological problems, the results of this meta-analysis showed further significant correlations to constructs of mental ill-health, such as stress, depression, and emotional exhaustion (Zhang & Liao, 2015). Finally, they state that leaders continued interpersonal mistreatment towards employees can endanger the positive psychological state of employees and can result in reduced mental health (emotional exhaustion, anxiety, and depression).

Two other meta-analyses also confirm the negative consequences of destructive leadership in general (Montano et al., 2017) and abusive supervision in particular (Mackey, Frieder, Brees, & Martinko, 2017). Consistent with Zhang and Liao (2015), Mackey et al. (2017) likewise found positive correlations between abusive supervision and personal outcomes such as depression and emotional exhaustion. As already mentioned in the previous chapter, Montano et al. (2017) analyzed different leadership styles with regard to outcome variables from the field of OHP. In line with all previous study results, a positive correlation with destructive leadership was found for burnout, stress, affective symptoms, and health complaints. This type of leadership thus promotes mental illness. Furthermore, constructs of mental health, namely well-being and psychological functioning, were investigated. On this continuum negative correlations were found. Therefore, Montano et al. (2017) concluded that any kind of destructive leadership should be avoided as it not only impairs mental health but also reduces positive mental states of employees.

Summary of the literature on health-impairing leadership. The previously reviewed literature outlines a clear picture of health-impairing leadership behavior. Profound empirical evidence was found for both actively destructive and passively avoiding leadership behavior that this behavior can have a negative impact on the mental and physical health of employees. Although the results for laissez-faire leadership were not consistent across the presented studies, I concluded that the number of studies showing a negative effect of non-leadership on mental health vastly outweighed those without a clear result. For actively destructive behavior, the meta-analyses presented above came to clear and consistent results: destructive leadership, such as abusive supervision, petty tyranny, toxic leadership, etc., increase indicators of mental illness, such as emotional exhaustion, and reduce

measures of mental health, such as well-being. These findings suggest that an organization should not only ensure that its leaders develop and adopt a normative leadership style that promotes the mental health of its employees, but also actively protect itself from deleterious leadership behavior. To this end, Vennemann and Brouns (2019) suggested that employees' emotional intelligence can be developed in a targeted manner, as this has been shown to act as a moderator between abusive supervision and irritation, buffering the negative effects.

3.2 LEADERSHIP AND LEADERS' MENTAL HEALTH

To draw a holistic picture of leadership and OHP, it is not only shown how leadership styles or leadership behavior affect the mental health of employees, but also what effects leadership can have on the leader itself. Since the research results in this domain are currently scarce, the decision was made to include leaders' mental health in one of the studies to be carried out.

Why was the mental health of leaders researched to such a limited extent? Barling and Cloutier (2017) have discussed various possible explanations for this question, favoring the following: They put forward the hypothesis that in general it is not a question of whether the leader has good mental health or not. Rather, it is about how employees and the public, including researchers, perceive the mental health of leaders. Two main theories, implicit leadership theories (Epitropaki & Martin, 2004, 2005) and "romance of leadership" (Meindl et al., 1985), can be used as explanatory models. Research on the attributes of a prototype of a positive leader shows characteristics such as sensitivity, dynamics, motivation and intelligence, which all tend to imply well-being and strength (Barling & Cloutier, 2017; Epitropaki & Martin, 2005). If most people have such implicit leadership theories about a prototypical leader, this would be a plausible explanation why little attention has been paid to the mental health of the leader. Furthermore, romanticizing the leader is another possible explanation for the limited research in this field. In the sense of an attribution for unusual situations, such as great corporate success, employees look for the causes. If employees believe that these situations were the result of actions and the influence of their leader, one can refer to it as a "romance of leadership", since the influence is overestimated by romanticizing the leader-

ship role. In someone who is perceived as so influential, mental health is not questioned (Barling & Cloutier, 2017). There is also evidence that leaders are generally considered stronger and healthier than, for example, employees and coworkers who are perceived to be prone to mental and physical illness (cf. Barling & Cloutier, 2017).

Leadership, a psychological burden for the leader? There is no doubt that the call for high-quality leaders, regardless of the concrete leadership theory, such as transformational, ethical or servant leadership, is becoming increasingly loud (Barling & Cloutier, 2017). Normative leadership theories that result in high-quality LMX relationships are associated with leadership effectiveness (Barling, 2014), and also promote the mental health of their employees, as described previously. Against this background, it does not seem intuitive that this positive leadership behavior may involve personal costs for the leader (Barling & Cloutier, 2017). Especially since a formal leadership role in an organization provides a social status that goes hand in hand with access to resources and personal and job-related control, which in turn should promote the well-being of a leader (Marmot, 2004).

Based on the current literature, Barling and Cloutier (2017) presented different aspects that provide an explanation why high-quality leadership may be at the expense of leaders' mental health: In the first place they pointed out cognitive complexity and the responsibility that comes with a leadership role. This can have a negative impact on mental health, even of supposedly resilient leaders. Secondly, social isolation and loneliness were mentioned as typical for senior managers, which violates the basic psychological need for social belonging and can therefore have a negative impact on mental health. Furthermore, leaders may also bear the social burden of negative behavior or emotions of their employees, which makes them so-called "toxic handlers", a term coined by Frost and Robinson (1999). The health of a person who is exposed to toxic influences is, following the term toxic, at risk. Barling and Cloutier (2017) describe the listed strains of the leadership role, i.e., complexity and responsibility, social isolation, and loneliness as well as a possible "toxic handler"-function, as emotional toll of high-quality leadership. This emotional toll exhausts the resources of the leader, which, according to COR

theory (Hobfoll, 1989), leads to resource depletion and consequently in a decline in mental health (Barling & Cloutier, 2017).

Empirical findings on leadership styles and leaders' mental health. As explained above, there are few studies on the relationship between leadership styles and mental health outcomes of the leader. While the article by Barling and Cloutier (2017) covered two articles on the direct relationship, according to my literature research there is to date a slightly broader empirical basis on the impact of leadership on leaders' mental health. These studies and their main results are presented in the upcoming chapters, starting with health-promoting leadership behavior.

3.2.1 Health-promoting Leadership Behavior

In contrast to the approach that high-quality leadership means an emotional toll on the leader and is associated with psychological stress over time, Lanaj, Johnson, and Lee (2016) have investigated the benefits that transformational leadership can have on day-level affective states of leaders. The hypotheses of this study are essentially based on two theories, firstly on the self-determination theory (Ryan & Deci, 2000a), and secondly on the affective events theory (H. M. Weiss & Cropanzano, 1996). The latter essentially assumes that events at the workplace can be a meaningful source of affects, e.g., through positive interactions between employee and leader (H. M. Weiss & Cropanzano, 1996). On the one hand, Lanaj et al. (2016) argued that, based on affective events theory, there is a direct connection between transformational leadership behavior and positive affect. On the other hand, the hypothesis was put forward that the connection between transformational leadership and positive affect is mediated by the basic psychological needs according to Ryan and Deci (2000a). Lanaj et al. (2016) conducted two surveys and found that transformational leadership has improved the affective state of the leader, i.e., positive affect increased, and negative affect decreased. Furthermore, they found that these effects were incremental and stronger than for other leadership behaviors, such as transactional, consideration, etc. The fulfillment of basic psychological needs has partially mediated the relationship between transformational leadership and positive and negative affect. Moreover, the researchers tested the personality dimensions extraversion and neuroticism as

potential moderators in their model. Emotionally unstable, neurotic leaders reacted with a higher degree of negative affect when basic psychological needs were not met. Extraverted leaders showed a significantly higher level of positive affect than introverted leaders when basic psychological needs were not fully satisfied. In summary, the study showed positive effects of transformational leadership behavior on positive affect and negative effects on negative affect at a day-level.

The chapter on health-impairing leadership behavior (3.1.2), which also includes the concept of abusive supervision (Tepper, 2000), has already shown on the basis of several meta-analyses that this leadership behavior leads to negative consequences for employees' mental health, such as psychological distress and emotional exhaustion (Mackey et al., 2017; Schyns & Schilling, 2013). In their article, Qin, Huang, Johnson, Hu, and Ju (2018) examined the connection between abusive supervision and mental health at the leader level. The actor-centric perspective has led them to base the article on the COR theory, as the principle of this theory is to constantly strive to acquire new resources and protect existing ones (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). Furthermore, it is assumed that the protection or build-up of resources is influenced by individual, i.e., personal, and contextual, i.e., situational, factors (Halbesleben et al., 2014). Qin et al. (2018) therefore argued that coping behavior, which they define as abusive supervision, is only beneficial to one's own well-being if the coping behavior itself does not generate stress. Therefore, they integrated a personal variable, empathic concern, into the study. This construct captures the individual inclination of a person to experience sympathy and compassion for other people (Davis & Oathout, 1987). Qin et al. (2018) also argued that situations that provide few resources or pose an active threat to one's own resources are also negative for one's own recovery. Therefore, they integrated the situational variable of job demands (e.g., Demerouti et al., 2001). In the paper two theoretical reasons were given why abusive supervision should have a positive effect on leaders' mental health (Qin et al., 2018): On the one hand, it would place increased demands on the leader to resist the impulses of aggressive behavior, i.e., if the leader resists abusive practices towards employees, this means further loss of resources. To live out abusive supervision thus frees the leader from the resource-draining action of behavior suppression, which protects against loss of resources. On the other hand, the principle of resource generation was presented as a further argument. By the

practice of abusive supervision, the leader is given an active feeling of control, because in the natural situation of power asymmetry the employees tend to agree with the instructions and rules in the short term. In addition, by achieving compliance and thereby experiencing control, resources can be replenished by satisfying basic psychological needs (Ryan & Deci, 2000a). These two theoretical arguments led the researchers to hypothesize that abusive supervision promotes leader recovery. Since recovery has a positive effect on work engagement (W. A. Kahn, 1990; Sonnentag, 2003), an indirect effect of abusive supervision on work engagement was also assumed (Qin et al., 2018). Since work engagement is an indicator of well-being (Bakker, Schaufeli, Leiter, & Taris, 2008), the Qin et al. (2018) implicitly tested the indirect effect of abusive supervision on the well-being of the leader with their hypothesis. The study was based on a multi-method approach in which two experiments were carried out and a multi-wave diary study was conducted over ten subsequent days. The results consistently showed that abusive supervision improves the recovery level of the leader in the short term. Furthermore, the mediating effect of abusive supervision on work engagement via recovery level was also shown. Moreover, these benefits were moderated by the variables empathic concern and job demands. The short-term recovery and the resulting work engagement were only shown if the leader had a low empathic concern or the job demands were high. In a supplementary analysis, Qin et al. (2018) also examined the long-term consequences of abusive supervision on leaders. This showed negative consequences on recovery level, satisfaction, and work engagement. The main explanation for these findings is that abusive supervision harms the relationship between employee and leader in the long run and that employees later have less trust in their leader and do not support them any longer. Due to the lack of support and commitment of the employees, the leader is forced to do more on their own, which leads to increased job demands and finally to resource depletion. In summary, the study has shown that abusive supervision can help leaders to recover in the short term and protect their own resources in situations of high job demands. At the same time, this finding only applies to leaders who tend to have a low empathy level, because otherwise abusive supervision is a burden for the leader itself and results in a loss of resources. It has also been shown that abusive supervision is not a means of choice to protect the mental health of leaders, as the long-term consequences have clearly shown to be neg-

ative. Therefore, the researchers conclude in the practical implications that it is healthier to reduce the job demands of leaders (e.g., by senior management) to lessen the likelihood of abusive supervision as a counterbalancing reaction.

Summary of the literature on health-promoting leadership for leaders own mental health. Even after extensive literature research, no further empirical studies on the connection between specific leadership behavior and the leader's own well-being could be found. The findings of Lanaj et al. (2016) are particularly valuable, as they show that at least a partial mediation of the positive connection between transformational leadership and leaders' mental health takes place through the satisfaction of basic psychological needs. This provides important insights into the short-term, cross-sectional motivation processes of leaders. Furthermore, the insight that even destructive leadership behavior can have a positive short-term effect on recovery and work engagement and thus on well-being is revealing (Qin et al., 2018). Nevertheless, they also showed a long-term negative effect of abusive supervision on recovery and work engagement. Of particular value is the finding from the study by Qin et al. (2018) that individual differences in the leader, e.g., empathy, and also situational factors, such as job demands, play a decisive role in the process of mental health development.

Both studies have also shown that a broad theoretical perspective on the leadership phenomenon is beneficial: self-determination theory has shown on a motivational level that leadership can nourish basic psychological needs in the short term and thereby promote mental health. It has also been shown that COR theory is a sound explanatory model for the relationship between specific leadership behavior and health-related variables. A further advantage of this theory is the broad perspective not only on the actor himself but also on personal and situational factors. Which theories are used and how they are applied in the present work, will be discussed in the further course of the thesis.

3.2.2 Health-impairing Leadership Behavior

After presenting studies on leadership behavior that fosters the mental health of the leader, research results are presented which, in accordance with

Barling and Cloutier (2017), assume that leadership can be an emotional burden for the leader.

Zwingmann, Wolf, and Richter (2016), compared to Lanaj et al. (2016), not only examined the cross-sectional effects of transformational leadership on the mental health of the leader, but also the longitudinal effects. Besides transformational leadership, they have also integrated laissez-faire leadership into their survey. The sample was collected in a German service company and consisted of 2,324 employees and 76 managers. In the cross-sectional design a negative effect of transformational leadership on emotional exhaustion is assumed, since the leader succeeds in creating personal, social, and organizational resources in the short term through transformational behavior. The opposite effect applies to laissez-faire leadership in cross-sectional design: laissez-faire leadership is positively related to emotional exhaustion, since it can be assumed that the emotional exhaustion of the leader increases if he or she does not meet the expectations placed on him or her due to lack of presence, feedback, appreciation, etc. The results could confirm the two hypotheses mentioned, even integrating job demands and job resources as control variables in a hierarchical regression model. For the deduction of the longitudinal hypotheses, Zwingmann et al. (2016) relied on the COR theory (Hobfoll, 1989). Since leadership, especially normative leadership styles such as transformational leadership, requires time and dedication from the leader, the leader needs sufficient personal resources to successfully exert the leadership role (Byrne et al., 2014). According to COR theory, there is a spiral of losses, which means that resource losses result in further resource losses. Therefore, the Zwingmann et al. (2016) assumed that transformational leadership leads to a loss of resources over time and thus promotes the emotional exhaustion of the leader in the long run. In the same way, they argued that laissez-faire leadership leads to loss of resources and thus promotes the emotional exhaustion of the leader. It is already known that laissez-faire leadership leads to work-related stressors, such as role stress and conflicts within the team (Skogstad et al., 2014). Furthermore, they supported their hypothesis with the argument that the lack of presence of the leader is understood as social exclusion by their employees and that the employees therefore reduce the social support for their leader (Zwingmann et al., 2016). In addition, they formulated the hypothesis that leaders' organization-based self-esteem (OBSE) acts as a moderator of the longitudinal

effect of transformational leadership on emotional exhaustion. This relationship was also explained using COR theory: Leaders who have a high OBSE tend to expose themselves to overstrain, which can lead to resource depletion and subsequently to emotional exhaustion. The results of the statistical analysis could confirm all three longitudinal hypotheses. Both transformational and laissez-faire leadership have health-impairing effects over a period of two years. Moreover, a high leaders' OBSE combined with high transformational leadership increased the effect on emotional exhaustion. At low levels of transformational leadership there is an interaction, i.e., high OBSE reduces the effect on emotional exhaustion. The authors therefore concluded that "every light has its shadow" (Zwingmann et al., 2016, p. 31).

Another study, which investigated whether high-quality leadership, in this case ethical leadership, also means an emotional toll for the leader itself, was conducted by Lin, Ma, and Johnson (2016). Based on the ego depletion theory (Baumeister, Bratslavsky, Muraven, & Tice, 1998), which postulates that a person has limited regulatory resources available to exercise self-control, it was derived how ethical leadership can lead to ego depletion. Lin et al. (2016) name two aspects of ethical leadership that consume regulatory resources and lead to a feeling of depletion and lack of willpower in the leader. The first aspect is normatively compliant behavior that can cost regulatory resources, e.g., because ethical standards are not always congruent with one's own inherent tendencies. The second aspect is to encourage employees to behave ethically. This can equally use regulatory resources, as leaders need to ensure compliance with standards, for example, by rewarding and punishing. This includes continuous monitoring of behavior, in addition to the usual management tasks, which can be an additional burden. Consequently, the researchers hypothesized that ethical leadership behavior leads to depletion and consequently favors the occurrence of abusive supervision. To test this hypothesis, two samples were collected. In the first study the constructs were collected as self-assessment by the leader. Although the constructs, e.g., depletion, can be better assessed by the leader itself, there is an increased susceptibility to common method variance. Therefore, a second sample was collected, in which the phenomena perceived by others, such as leadership behavior (ethical and abusive), were measured by an others-assessment. The results were consistent across both studies and showed that ethical leadership behavior leads to

ego depletion of the leader the following day and this resource depletion for self-regulation in turn leads to increased abusive supervision on the next day. Lin et al. (2016) are nevertheless convinced that ethical leadership behavior is extremely important for organizations and therefore interventions should be taken to prevent mental fatigue of leaders to avoid possible negative consequences such as abusive supervision.

In their study, Bernerth and Hirschfeld (2016) analyzed the connection between LMX and the subjective well-being of the leader of a group. Well-being was measured using two constructs, namely positive affect and job stress, which also comes close to the idea of a two continua model of mental health (refer to chapter 2.1.1). What was special about their study was the approach of a multi-level analysis, which looked at the well-being of the leader on an individual level and aggregated the LMX-related variables on a group level. At the group level they draw both the mean level of LMX over the group members (employees) and LMX differentiation, which measures the qualitative differences in the social exchange relationships between the leader and the different group members. Theoretically, they argued, comparable to other studies (Courtright, Colbert, & Choi, 2014), with the transactional stress theory (Lazarus & Folkman, 1984): leadership roles in particular require many social transactions between different entities, e.g., employees, customers, senior management, etc., so that, depending on the available coping resources, such transactions may sooner or later lead to a reduction in leaders' well-being. From this Bernerth and Hirschfeld (2016) deduced that low average LMX levels and low LMX differentiation at group level act as stressor, in the sense of the transactional stress model, which results in a negative impact on the well-being of the respective group leader. In their survey and subsequent statistical analysis, the authors also controlled for typical variables such as gender and job resources including organizational commitment and job satisfaction. In a hierarchical regression analysis, they tested whether mean LMX levels and LMX differentiation have a significant incremental effect beyond job resources on the criterion variables of well-being. The results revealed that the mean LMX level had no significant effect on positive affect or job stress. For the LMX differentiation, however, a statistically significant effect was shown for both criterion variables. The higher the LMX differentiation the more job-related stress for the leader. The lower the LMX differentiation, the more positive affect the leader has. Bernerth

and Hirschfeld (2016) conclude that leaders should place great emphasis on maintaining equally high-quality LMX relationships with all employees, also in the interest of their own health. On a theoretical level, this research result implied a bidirectional social exchange relationship in the sense of the LMX theory, which affects employees and leaders alike.

A comparable idea of mutual influence between employee and leader was explored by Wirtz, Rigotti, Otto, and Loeb (2017). Based on the JD-R model, they used a longitudinal study design to investigate whether the emotional exhaustion of employees can have a crossover effect on the emotional exhaustion of the leader. It was hypothesized that high emotional exhaustion of an employee is a job demand of the leader or social stressor at the workplace, which promotes the leader's own emotional exhaustion. They also examined whether the work engagement of the employees has a positive effect on the work engagement of the leader. Based on the assumption that leaders who perceive their employees as engaged can rely on them more strongly, it was argued that leaders need to be less concerned about the team and can therefore become more engaged in their own tasks. As work engagement is an important indicator of well-being at work, it was hypothesized that work engagement of the employee acts as a social resource for the leader in the sense of the JD-R model and increases the work engagement of the leader. Furthermore, they analyzed if emotional self-efficacy of the leader has a moderating effect on the above-mentioned relationships. The construct of emotional self-efficacy describes the trust in the personal ability to process emotional information at work, in the sense of understanding, regulating, and using such information. A leader who has a high level of emotional self-efficacy is therefore more likely to personalize negative experiences of others and consequently develop symptoms of negative mental health over time. Therefore, the authors assumed a strengthening effect of emotional self-efficacy for both longitudinal relationships. The results showed a crossover from the work engagement of the employee to the work engagement of the leader over a period of eight months. For emotional exhaustion of the employee at the first measurement point, however, no significant effect on the emotional exhaustion of the leader at the second measurement point could be shown. Nevertheless, a moderating effect for emotional self-efficacy could be shown which was in line with the hypothesis. With high emotional exhaustion (employees) and high emotional self-efficacy of

the leader at measurement time point one, there was higher emotional exhaustion of the leader at measurement time point two. With low emotional exhaustion of the employee, the effect changed, so that the emotional exhaustion of the leader was less pronounced in leaders with high emotional self-efficacy than in leaders with low emotional self-efficacy. Wirtz et al. (2017) make an important contribution to the state of research by showing that there is a crossover of states between employees and leaders and that leadership is a mutual social influence process in which employees play an equally important role in the work experience of the leader.

In a ten-day experimental experience sampling, Foulk, Lanaj, Tu, Erez, and Archambeau (2018) investigated how psychological power of the leader affects leaders' mental health. To develop their theoretical concept, the researchers made use of two well-established theories. First, they used the social distance theory of power (Magee & Smith, 2013), which states that power induces social distance between the power-holder and the powerless. This leads to negative, destructive behavior of the powerholder, i.e., in an organizational context the leader (Foulk et al., 2018). This favors the emergence of abusive supervision, as the leader objectifies their employees. Social distance theory suggests that powerful people have a distorted perception of powerless in terms of the expectation that powerless will follow the powerful, which can lead to powerful people feeling unjustly and disrespectfully treated (Magee & Smith, 2013). Since powerholders also perceive good-natured interactions with powerless as unduly negative (*ibid.*), the hypothesis was put forward that psychological power is positively associated with perceived incivility by others (Foulk et al., 2018). These two arguments were used to explain why psychological power leads to abusive supervision and perceived incivility, and it was further assumed that perceived incivility leads to retaliatory actions, i.e., abusive supervision. Foulk et al. (2018) further assumed that there is a dispositional moderator variable in the relationship between psychological power and abusive supervision. They integrated the Big Five dimension agreeableness of the leader into the model, since agreeable persons strive for social intimacy rather than social distance. Also, agreeableness can mitigate the before-mentioned perceptual and behavioral reactions associated with psychological power. Although all leaders wield psychological power, the researchers assumed agreeable leaders react significantly different than non-agreeable leaders. They therefore hypothe-

sized that high agreeableness weakens the positive relationship between psychological power and abusive supervision. They put forward a comparable hypothesis for the connection between psychological power and experienced incivility. Second, they used content-based theories of power (e.g., Keltner, Van Kleef, Chen, & Kraus, 2008) which, compared to social distance theory (Magee & Smith, 2013), assume that power is not only unidirectional from power-holder to powerless, but that power is an interdependent, bidirectional process between the actors involved. This means power does not take place in a social vacuum, because those who exercise power, in this case the leaders, depend on others, i.e., their employees. That is, employees react to the use of power, which can influence the behavior and attitudes of leaders. The content-based theories thus assume that power-induced negative behavior of a leader, e.g., abusive supervision, endangers the well-being of the leader, since this behavior triggers negative reactions from the employees, which can limit the leader's supremacy and the associated influence in the group. Foulk et al. (2018) did not measure well-being directly but argued that daily need satisfaction and relaxation are two preconditions of well-being. In this sense, they further argued that even perceived incivility reduces the well-being of the leader, as it counteracts the satisfaction of the need for social relatedness. Therefore, based on their integrated theoretical framework, which combines social distance theory and content-based theories of power, they suggest that power leads to abusive supervision and perceived incivility, which in turn threatens the daily need satisfaction of the leader. Therefore, both abusive supervision and perceived incivility were proposed as mediators between psychological power and psychological need satisfaction. The analysis of the empirical data showed that psychological power of the leader had a positive effect on abusive supervision and perceived incivility. Furthermore, it could be shown that the relationship between psychological power and abusive supervision was partially mediated by perceived incivility by others. At the same time, abusive supervision and perceived incivility worsened the well-being of the leader, which was indicated by a limited relaxation at home and by a reduced satisfaction of basic psychological needs. In addition to this direct effect, the indirect connection between psychological power and impaired well-being of the leader was revealed, which was mediated by abusive supervision and perceived incivility. Finally, the hypothesis that leaders with high psychological power and high agreeableness show a lower de-

gree of abusive supervision than those with low agreeableness could be accepted, which led the authors of the article to the following conclusion: “In all, we show that those in a state of elevated psychological power are neither universally monsters (as demonstrated by our agreeableness moderator), nor unaffected jerks (as presented by our findings that power-induced abusive behavior hurt actors’ well-being)” (Foulk et al., 2018, p. 674).

Lin, Scott, and Matta (2019) have used two experience-sampling studies to investigate how and under which conditions transformational leadership behavior has a negative impact on the leaders themselves. In addition to the direct link between transformational leadership and emotional exhaustion, emotional exhaustion was modelled as a mediator for the relationship between transformational leadership behavior and turnover intentions. The researchers derived the hypotheses mainly from COR theory. For each of the four dimensions of the construct of transformational leadership, it was theoretically argued why the associated behaviors can consume personal resources of the leader. Idealized influence carries the risk of diminishing the resources of the leader, since it is at times necessary, as an influential, charismatic role model, to regulate one’s own emotions, in the sense of emotional labor. Thus, once the leader is forced to show superficial emotions (surface acting) that they do not honestly feel, this is stressful and resource consuming. Inspirational motivation can also be stressful for the leader due to emotional regulation mechanisms, but Lin et al. (2019) named two further aspects that can have a negative impact on the resources of the leader: Time and energy that the leader needs to invest in motivating employees and sophisticated communication methods, such as expressive non-verbal and metaphorical verbal communication, can also be demanding. Giving intellectual stimulation is resource-consuming in that the leader must also critically examine their own habits and working methods to question existing assumptions and procedures. Fiske (1993) found that high levels of power are associated with an increased use of stereotypes and thus with less individualized consideration of the personal needs of others. Therefore, Lin et al. (2019) stated that individualized consideration strains leaders’ resources since this devotion may be contrary to the nature of a leader. Furthermore, according to LMX theory, leaders form relationships of varying quality with different employees (Graen & Uhl-Bien, 1995). To devote equal attention to the needs of all employees, which can change over time, a great deal

of effort is required from the leader. Not only the direct relationship between transformational leadership behavior and emotional exhaustion of the leader was examined, but also under which conditions (Lin et al., 2019). They decided to examine two characteristics of the employees as moderator variables. On the one hand, they integrated conscientiousness, a dimension of the Big Five, into the study, because they assume that conscientious employees bring many qualities that help transformational leaders achieve their mission. On the other hand, they integrated competence as a facet of the personality dimension of conscientiousness into the study, because they assume that this facet is a concrete quality that even beyond the dimension of conscientiousness, supports transformational leaders in achieving their goals. They therefore assumed that both conscientiousness and competence of the employees can weaken the positive intra-individual effect of transformational leadership on leaders' emotional exhaustion. The results showed a consistent picture across two studies: transformational leadership was in both cases positively associated with emotional exhaustion, which in turn was positively linked to the turnover intention of the leader. Furthermore, the moderator analysis revealed that the positive link between transformational leadership and leaders' emotional exhaustion was stronger when the employees showed a low level of conscientiousness and a low level of competence. Consequently, employees with these personality traits seem to support the goals or mission of the transformational leader and thus replenish the exhausted resources of transformational leaders. Lin et al. (2019) concluded that a balanced view of the advantages and disadvantages of transformational leadership should shape future research and practice, as their study clearly showed that there are downsides to positive leadership styles such as transformational leadership. At the same time, these dark sides only occur under certain conditions, which underlines the importance of contextual variables.

Summary of the literature on health-impairing leadership for leaders' own mental health. To summarize, two theoretical lines of reasoning can be derived from previous research on the negative effects of leadership on leaders' own mental health.

Firstly, three papers have argued with COR theory (Hobfoll, 1989). Zwingmann et al. (2016) marked the starting point with their comprehensive

cross-sectional and longitudinal study, in which they showed that transformational leadership has a positive effect on the emotional exhaustion of the leader over a period of two years. This effect was intensified by OBSE. A negative effect of transformational leadership on emotional exhaustion was revealed in the cross-sectional study, which is basically in agreement with the results of Lanaj et al. (2016). Lin et al. (2016) used the strength model of self-control (Baumeister et al., 1998), which has a large conceptual overlap with COR theory (Hagger, 2015). In their study they were able to show that ethical leadership behavior leads to a loss of personal resources of the leader, i.e., ego-depletion, which in turn results in abusive supervision (Lin et al., 2016). Lin et al. (2019) also showed that transformational leadership leads to emotional exhaustion of the leader. In their proposed model, emotional exhaustion of the leader simultaneously functions as a mediator between transformational leadership and turnover intention. Transformational leaders were thus more likely to be stressed by depleted resources for self-control, which increased the turnover intention. They were also able to show that the personality of the employees had a moderating effect on the aforementioned relationship: Employees with a low level of conscientiousness led to a stronger effect because the employees tended to be less goal-congruent with the leader.

Secondly, there have been studies that argued on transactional stress theory (Lazarus & Folkman, 1984), JD-R model (Demerouti et al., 2001), and power theories such as social distance theory (Magee & Smith, 2013) and consent-based theories of power (Keltner et al., 2008). These studies all had in common that they understood the consequences of leadership on the leader as an interdependent social exchange process. In addition to the clear focus on COR theory, I consider social exchange theory (e.g., Cropanzano & Mitchell, 2005) to be the second line of argumentation in the current literature basis. Although other theories were used in the articles, the nature of social exchange was pervasive. Starting with the work of Bernerth and Hirschfeld (2016), who analyzed the effects of overall LMX and LMX differentiation on leaders' well-being, the focus on the quality of the social exchange relationship between employee and leader has already been emphasized by the LMX construct. They found that a high LMX differentiation led to a decreased well-being of the leader, which suggests that an equally good quality of social relationships between the leader and all their employees is of high value, not only for the employees. Even though Wirtz et al. (2017) did not apply social

exchange theory in a closer definition, they constructed their explanatory model around the JD-R model, which also contained components of social exchange theory in the idea they presented. In their argumentation of the crossover from work engagement of the employee to work engagement of the leader, the basic features of social exchange could be identified. This exchange was then understood as a social resource of the leader since the leader can rely on his employees in the social exchange relationship and thus does not run the risk of depleting the leader's personal resources. Both theoretical aspects of social exchange and the conservation of resources idea were applied. Foulk et al.'s (2018) power-based perspective on leadership and mental health of the leader likewise contained basic features of social exchange. In particular, the application of consent-based theories of power helped to make the dynamically unfolding leadership process appear reciprocal. This means that the way in which leaders exert their psychological power has an impact on the behaviors of employees towards their leaders. Thus, power-induced negative behavior of the leader can also have a negative effect on the mental health of the leader.

In summary, there are different approaches to describe the consequences of leadership on leaders' mental health. The research results to date suggest that, in addition to the theoretical argumentation of the direct or indirect relationship between leadership style and health-related outcomes, it is particularly important to consider moderator variables, such as intra-individual differences and context factors, in the study design. In retrospect it is no longer possible to answer why, for example, Zwingmann et al. (2016) and Lin et al. (2019) arrived at contradictory results using similar constructs. The difference in the research design is the most conceivable explanation, but also the possibly conflicting variables that could have moderated the relationship. The presented studies give clear indications that dispositional variables of the leader (e.g., agreeableness; Foulk et al., 2018) and conscientiousness of the employee (Lin et al., 2019), but also variables from the universe of self-efficacy theory (Bandura, 1977a), such as OBSE and emotional self-efficacy, are important moderator variables. This finding will also be reflected in the development of the overarching conceptual model, which will be presented in the following course of this thesis.

4 INTERMEDIATE DISCUSSION

“The aim of argument, or of discussion, should not be victory, but progress.”

Joseph Joubert, Moralist & Essayist

4.1 SYNTHESIS OF THE LITERATURE

This chapter summarizes and compiles the models, concepts, theories, and research results presented so far. Building on this, the overarching conceptual research model is then developed and presented in the following chapter. The structure of this chapter will be based on the previous course of the thesis, i.e., from the concept of mental health (and illness), theories and models of OHP, leadership theories and their impact on mental health, the nomological network of servant leadership, to the latest state-of-the-art on leadership and health of leaders and employees.

Mental health and illness in OHP. Based on and in accordance with the latest NIOSH definition of OHP, this thesis will focus on how to protect and promote the health and well-being of employees (The National Institute for Occupational Safety and Health (NIOSH), 2013). More specifically, the present research will focus on mental health variables, although in terms of psychosomatics, this does not exclude the indirect effect of mental health variables on physical health parameters. Also, in accordance with the most recent WHO definition of health, it is not described as the mere absence of disease, but as a state of full physical, social and mental well-being (World Health Organization (WHO), 2014). This WHO definition also carries with it the increasingly loud call within OHP to move away from a mere disease model (Schaufeli, 2004). For this reason, after the turn of the millennium, constructs of positive psychology have been increasingly investigated and have moved into the focus of interest (ibid.). The present thesis follows this call and movement, although the disease model should not be completely neglected, as Keyes (2009) argued that mental health and mental illness are not two opposite poles on a single continuum, but rather that mental health is a holis-

tic state consisting of two distinct dimensions, firstly mental illness and secondly mental health. In this thesis, the two distinct dimensions are measured using two psychological constructs, namely flourishing (Diener et al., 2010; Keyes, 2009, 2016; Ryan, Curren, & Deci, 2013) for mental health and emotional exhaustion as a dimension of burnout (Maslach, 1998) for mental illness.

Despite the fact that OHP in the classical understanding does include the effects of unemployment (Schaufeli, 2004), this is excluded for the present thesis, since leadership, in particular servant leadership, is examined as an independent variable with regard to its relationship to mental health. Likewise, following Schaufeli (2004), it is acknowledged that OHP takes place on different, closely meshed levels, by considering not only the level of the individual (mental health of the employee and the leader), but also that of the job environment (leadership style). At the same time, this thesis emphasizes that OHP has a firm place in research and practice (Schaufeli, 2004), in that on the one hand it aims at more research-related results such as psychological processes, i.e., mediators, and on the other hand, at more practice-oriented results and recommendations such as antecedents and moderators.

Theories and models of OHP. Following Schaufeli (2004), different models were presented, which can be divided into three different classes:

1. Psychosocial factors as causal agents of stress.
2. Social exchange mechanisms related to burnout.
3. Motivational processes as precursors of well-being.

In these classes, there are more specific models, such as the role stress model, which is limited to stressors from the work role, but also more general models and theories, such as the JD-R model, P-E fit theory, social exchange model of burnout, COR theory or the SDT, which can be applied to various OHP problems.

Moreover, these theories and models seem to be equally suitable for research questions in leadership research. For example, Schaufeli (2015) introduced leadership as a variable with its own *raison d'être* into the JD-R model. Similarly, certain leadership behavior in the JD-R model could also be regarded as job resources or job demands. With person-supervisor fit, the P-E fit theory also offers an already suitable concept for the investigation of dyadic relationships between

employee and leader (Kristof-Brown et al., 2005). Furthermore, the social exchange model of burnout (Schaufeli, 2006) offers a solid theoretical foundation for research questions that focus on stress and burnout in the leadership context. An analysis on different levels, namely employees and leaders, is conceivable using this model. Another special feature of this model is the incorporation of COR theory, which has already been used in various empirical studies to investigate the effects of leadership on leaders' mental health (e.g., Byrne et al., 2014; Lin et al., 2016). Furthermore, SDT, with its concept of basic psychological needs, provides a sound theoretical basis for its application to the question of how leadership can affect employees' mental health (Baard et al., 2004). It should also be emphasized that the concept of basic psychological needs has already been applied in the context of servant leadership (Chiniara & Bentein, 2016; Mayer et al., 2008; van Dierendonck et al., 2014). In the upcoming chapter, the conceptual research model will be presented, describing in more detail which theories and models are applied to which specific research question and associated study. The hypothesis development will be carried out in the respective chapters of the empirical studies.

Servant leadership as a promising leadership theory in OHP. The phenomenon of leadership was defined as a process of social influence through interactions between a leader in the formal leadership role and the employee (Yukl, 2006). I am aware that social influences also exist outside the formal leadership role, but those persons with a formal leadership role have a particularly large influence on OHP related outcome variables (Kelloway & Barling, 2010). For this reason, it is again important to recognize that leadership or leadership behavior is not independent of moderating and mediating variables (Yukl, 2006).

After a plethora of positive, "bright" and negative, "dark" leadership theories were presented, covering, among others, the FRL model (Bass & Riggio, 2006) and moral leadership theories (Lemoine et al., 2019), which included transactional (House, 1971; Waldman et al., 1990), transformational (Bass, 1985; Burns, 1978), authentic (Avolio et al., 2004; Walumbwa et al., 2008), ethical (Brown & Treviño, 2006; Brown et al., 2005) and servant leadership (Greenleaf, 1977; Liden et al., 2008; Sendjaya & Sarros, 2002; van Dierendonck, 2011), the question arises as to which leadership theory has the strongest potential to have a positive effect on

the mental health of employees and leaders. What may seem to be apparently valid is that this question, and the decision it involves, relates to the various positive leadership theories. Not surprisingly, positive leadership theories have a predominantly positive effect on employees' mental health (Gregersen et al., 2011; Kuoppala et al., 2008; Montano et al., 2017; Skakon et al., 2010) and leaders themselves (Lanaj et al., 2016). At the same time it needs to be acknowledged that positive leadership theories can also lead to negative health consequences for the leader (Lin et al., 2016, 2019; Zwingmann et al., 2016). For negative or destructive leadership theories, the effects on the mental health of employees are clearly detrimental (Schyns & Schilling, 2013). For leaders, destructive leadership behavior can result in recovery and work engagement in the short term, although this effect does not last in the long term (Qin et al., 2018). Assuming that positive influences of destructive leadership on mental health are the exception rather than the rule, and considering the call for positive psychology in OHP (Schaufeli, 2004), the issue remains as to which of the positive leadership theories should be investigated in terms of positive effects on mental health. With reference to the extended leadership hierarchy concept from figure 20, it can be stated that transformational leadership augments transactional leadership (Bono & Judge, 2004) and servant leadership shows incremental validity beyond the FRL model (Grisaffe et al., 2016). As servant leadership is at the top of the hierarchy and according to a meta-analysis it can be expected that a promising future lies ahead for this leadership theory (Hoch et al., 2018), I have opted to analyze servant leadership with a focus on its potential for health-related outcomes for employees and leaders. Compared to ethical and authentic leadership, which are also included under moral leadership approaches (Lemoine et al., 2019), Hoch et al. (2018) draw the following conclusion regarding the added value of these leadership approaches compared to transformational leadership:

“The high correlations between both authentic leadership and ethical leadership with transformational leadership coupled with their low amounts of incremental variance suggest that their utility is low unless they are being used to explore very specific outcomes. Servant leadership, however, showed more promise as a stand-alone leadership approach that is capable of helping leadership researchers and practitioners better explain a wide range of outcomes” (p. 501f.).

In addition to the broad literature, which has also been summarized in different systematic literature reviews (Eva et al., 2019; Xu et al., 2020) and has already been presented in this thesis, there is first empirical evidence for a positive relationship between servant leadership and mental health. For example, Barbuto and Wheeler (2006) and Mayer et al. (2008) were able to show positive relationships between servant leadership and job satisfaction, which is a dimension of subjective well-being (Diener, Suh, Lucas, & Smith, 1999). It was also empirically shown that servant leadership correlated negatively with job stress (Jaramillo, Grisaffe, Chonko, & Roberts, 2009), and that there is a strong correlation between servant leadership and employee flourishing (Giolito et al., 2020). The research of Rivkin et al. (2014) showed likewise that servant leadership is an important determinant of employees' mental health by demonstrating that servant leadership showed negative correlations to different short- and long-term indicators of strain. These first positive findings are supported by a comprehensive and promising theoretical basis covering servant leadership and well-being (Panaccio, Donia, et al., 2015).

State-of-the-art on leadership and employees' mental health. A condensed summary of the literature on health-promoting and health-impairing leadership is presented hereafter.

A variety of meta-analyses examined the literature on different leadership styles and employees' mental health and predominantly came to positive results regarding the health-promoting effect of positive, "bright" leadership theories (Gregersen et al., 2011; Kuoppala et al., 2008; Montano et al., 2017; Skakon et al., 2010). In these meta-studies special attention was given to transformational leadership. At the same time there are first promising results on servant leadership. As already described in the previous section, servant leadership was able to relieve strain and stress (Jaramillo et al., 2009; Rivkin et al., 2014). Also, classical models of OHP, such as the JD-R model, have been used to explain the relationship between servant leadership and symptoms of burnout (Coetzer et al., 2017b). In terms of positive psychology, servant leadership also promoted job satisfaction, which is considered a facet of subjective well-being (Barbuto & Wheeler, 2006; Diener et al., 1999; Mayer et al., 2008). However, a study particularly valuable for this thesis could show that the positive relationship between servant leadership

and employees' well-being is fully mediated by autonomous motivation in the sense of SDT (C. Y. Chen et al., 2013). Further research, which was not presented in detail, also showed a positive effect of servant leadership on well-being (Feng, 2015; Lohrey, 2015). They also based both studies on SDT, with one thesis modeling psychological capital as a mediator (Lohrey, 2015) and the other thesis establishing the satisfaction of basic psychological needs as a mediator (Feng, 2015).

For health-impairing leadership behavior, the literature research provided a clear picture: A broad empirical evidence was found that both actively destructive and passively avoiding leadership behavior has a negative impact on the mental and physical health of employees (Hershcovis & Barling, 2009; Mackey et al., 2017; Montano et al., 2017; Schyns & Schilling, 2013; Skakon et al., 2010; Zhang & Liao, 2015). Regarding laissez-faire leadership, empirical evidence showed a mixed picture. While some studies could not achieve significant results (Mazur & Lynch, 1989; Sosik & Godshalk, 2000), others showed significant positive correlations of passive-avoiding leadership and dimensions of burnout, such as emotional exhaustion and cynicism (Hetland et al., 2007; Zopiatis & Constanti, 2010) or other indicators of stress (Rowold & Schlotz, 2009; Theorell et al., 2012). In line with the conclusion of Skogstad et al. (2017), I conclude that the empirical evidence for positive correlations of laissez-faire leadership and emotional exhaustion is relatively strong and by far outweighs the ambiguous results. For actively destructive behavior the results are conclusive: destructive leadership, such as abusive supervision, petty tyranny, toxic leadership, etc., increase indicators of mental illness, such as emotional exhaustion, and reduce measures of mental health, such as well-being (e.g., Schyns & Schilling, 2013). These findings suggest that an organization should not only ensure that its leaders develop and adopt a normative leadership style like servant leadership that promotes employees' mental health, but also actively protect the organization from deleterious leadership behavior. This illustrates the importance of positive, constructive leadership and the downside of negative, destructive leadership behavior for employees' mental health.

State-of-the-art on leadership and leaders' mental health. "While employees' mental health is the focus of considerable attention from researchers, the public, and policymakers, leaders' mental health has almost escaped attention" (Barling

& Cloutier, 2017, p. 394). From my point of view, this quotation can still be confirmed at the present time. After extensive literature research on the health-promoting effect of leadership behavior on leaders' health, only a few empirical studies could be found covering this. For example, Lanaj et al. (2016) were able to show that the positive relationship between transformational leadership and leaders' mental health is partially mediated by the satisfaction of basic psychological needs. This allows insights into possible short-term psychological processes that occur in the leader (Lanaj et al., 2016). Furthermore, the study by Qin et al. (2018) showed that even destructive leadership behavior can have positive short-term effects on recovery and work engagement and thus on the leaders' well-being. In the long term, however, destructive leadership behavior strikes back and results in a negative impact on these same variables (Qin et al., 2018). Of particular value for this thesis is the finding of Qin et al. (2018) that individual differences in the leader, such as empathy, but also situational factors, such as job demands, play a vital role in the process of mental health development. Besides the two different theoretical perspectives, namely SDT and COR theory, the studies have taught us that not only the actor himself (leader) but also moderating influences from personal and situational factors should be considered.

The call for high-quality leaders, regardless of the specific leadership theory (transformational, ethical, servant, etc.) is getting increasingly louder (Barling & Cloutier, 2017), as normative leadership theories can lead to high-quality LMX relationships and leadership effectiveness (Barling, 2014), and even, as described above, can promote the employees' mental health. With that said, it appears counterintuitive at first glance that positive leadership behavior may be at leaders' cost (Barling & Cloutier, 2017), especially since a formal leadership role in an organization is associated with a social status that goes hand in hand with access to resources and personal and work-related control, which should normally be conducive to well-being (Marmot, 2004). Based on the current literature, Barling and Cloutier (2017) have identified three aspects why high-quality leadership could put a strain on the leaders' health:

1. Cognitive complexity and responsibility associated with the leadership role.

2. Social isolation and loneliness are assumed to be typical for senior leaders. This leads to the basic psychological need for social relatedness not being satisfied.
3. Senior leaders must deal with the social burden resulting from negative behavior and emotions of employees. This function is described as “toxic handler” (Frost & Robinson, 1999).

All three aspects represent an emotional toll for the leader, which, according to COR theory, leads to resource depletion and ultimately to impaired mental health (Barling & Cloutier, 2017; Hobfoll, 1989).

In empirical research, the theoretical deduction by using COR theory was predominant. Zwingmann et al. (2016) marked the starting point for this trend with their comprehensive study of transformational leadership and emotional exhaustion. In this study, both cross-sectional and longitudinal (two years) data were collected, with OBSE also being considered as a moderator. The cross-sectional study was consistent with Lanaj et al. (2016) that transformational leadership reduces emotional exhaustion, whereas the longitudinal study over two years showed that transformational leadership and emotional exhaustion were positively related. Lin et al. (2016), who used the strength model of self-control (Baumeister et al., 1998), which has a large conceptual overlap with the COR theory (Hagger, 2015), could show that ethical leadership led to the loss of personal resources, which promoted abusive supervision. Again, based on the COR theory, Lin et al. (2019) showed that transformational leadership led to emotional exhaustion, which also led to turnover intentions as a mediator. In this study, they analyzed the personality of employees as moderator. Employees with lower conscientiousness increased the effect, as they had less congruence with the leaders' goals.

Besides the COR theory there have been studies based on LMX theory (Bernerth & Hirschfeld, 2016), the JD-R model (Demerouti et al., 2001; Wirtz et al., 2017) and power theories, such as social distance theory (Foulk et al., 2018; Magee & Smith, 2013) and consent-based theories of power (Foulk et al., 2018; Keltner et al., 2008). These studies had in common that they understood the consequences of leadership on the leader as the result of an interdependent social exchange process (Blau, 1964; Cropanzano & Mitchell, 2005). Although other theories were applied, the nature of social exchange theory was pervasive.

Regardless of which theory was used to develop the hypotheses, the research results to date suggest that, besides the theoretical argumentation of direct and indirect effects, it is important to consider moderator variables such as intra-individual differences in the study design. In retrospect, it is difficult or even impossible to test why Zwingmann et al. (2016) and Lin et al. (2019) reached conflicting results although they used the same constructs. Besides the research design, moderator variables, for example, could have influenced the relationships studied, which could explain the conflicting results. Potential moderators are also given by the studies presented, such as dispositional variables of the leader (agreeableness; Foulk et al., 2018) and the employee (conscientiousness; Lin et al., 2019). Variables from the field of self-efficacy theory (Bandura, 1977a), such as emotional self-efficacy and OBSE, can likewise be important moderator variables.

4.2 CONCEPTUAL RESEARCH MODEL

After summarizing the relevant literature in the previous chapter, the theories, models, constructs, and empirical research results presented must be incorporated into the conceptual research model of the thesis. The proposed conceptual research model provides the overarching framework for the empirical studies to be conducted in the scope of this thesis.

Figure 23 shows a rather generic model. However, this model already abstracts the central variables: emotional exhaustion and flourishing as dependent variables in the sense of the two continua model of mental health and servant leadership, first as dependent variable, i.e., which antecedents lead to servant leadership, and second as central independent variable:

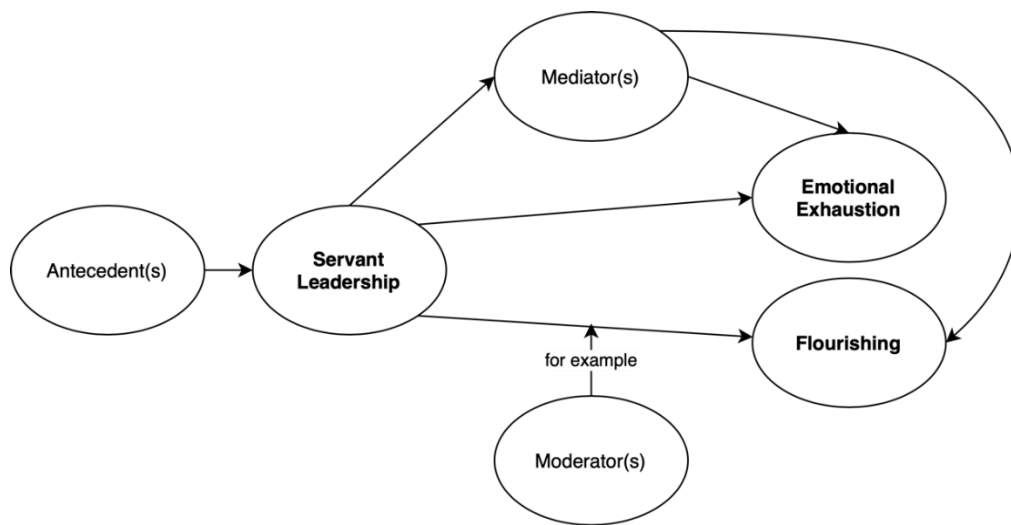


Figure 23: Generic Conceptual Research Model

After the following presentation of the individual studies, they will be combined into an overarching conceptual research model to show the links between the studies and the overall picture of this dissertation:

Study 1: Why do leaders engage in servant leadership? With regard to this research question, several independent variables are investigated with respect to their predictive power for servant leadership. Van Dierendonck and Patterson (2015) provide a theoretically sound framework for the construct of compassionate love. Based on this, Brouns et al. (2020) have published an empirical study that examines compassionate love and narcissism, as the psychological antithesis to compassionate love, as antecedents of servant leadership. Furthermore, the conceptualization of servant leadership is based on biblical ideas and the ideal servant leader was modelled on the role model of Jesus Christ (Wong & Page, 2003). Wong and Page (2003) described servant leadership as a transcendental force, “because it transcends self-interests in the service of others. To practice SL, leaders need to empty themselves and their pride, their selfishness, and worldly aspirations. That is, acquiring attitudes and behaviors of humility is not enough. SL demands the radical step of sacrificing self-interest and dying with Christ on the cross” (p. 8). This description of servant leadership raises the question of whether the religiousness of a leader has an influence on the extent to which the leader

displays servant leadership behavior. Therefore, religiousness, along with compassionate love, and narcissism, is considered as an independent variable in the conceptual research model.

Study 2: How is enacting in servant leadership related to leaders' emotional exhaustion and flourishing? The second study also focuses on the leader level. Since it has become clear from the literature that research on the relationship between leadership behavior and leaders' mental health is scarce (Barling & Cloutier, 2017), it seems important for the present study to examine the relationship between servant leadership and leaders' mental health.

This study analyzes the role of experienced meaningfulness as a mediator of the relationship between servant leadership and mental health. Bakan (1966) introduced a dualistic view of human existence: communion and agency. Following this idea, the basic motives of power and achievement are related to agency-oriented people and the striving for affiliation and intimacy are related to communion-oriented people (Brunstein, Schultheiss, & Grässman, 1998; Schönbrodt & Gerstenberg, 2012). Considering the concept of servant leadership, it can be assumed that there is a close connection between communion and servant leadership. In the sense of the theory of purposeful work behavior (Barrick et al., 2013), people perceive meaningfulness in those activities that are congruent with their own motivational tendencies. These communal motives mirror the higher-order goal of communion striving in the theory of purposeful work behavior (Barrick et al., 2013). The whole model of servant leadership theory is in concordance with striving for communion: the affiliation goals such as helping, cooperating, mentoring and nurturing as well as the affiliation job characteristics such as interdependence, interactions outside organizations and social support (Barrick et al., 2013). From the perspective of the theory of purposeful work behavior, perceived meaningfulness is understood as a process for motivation. Since meaningfulness is an important antecedent of well-being and health in general, it is proposed as a mediator (Arnold et al., 2007; Britt et al., 2001; Compton, 2000; Crego et al., 2019). I derive that individuals with traits that are congruent with communion and the idea of servant leadership will show servant leadership behavior. Through the sense of coherence these leaders experience meaningfulness in their work, which promotes their flourishing and mitigates emotional exhaustion.

The second study aims to create a deeper understanding of whether and how servant leadership affects leaders' mental health. I am convinced that the TPWB provides a solid theoretical foundation to explain positive effects of servant leadership through experienced meaningfulness.

Study 3: How servant leadership relates to followers' emotional exhaustion and flourishing? As already outlined, there are first empirical studies that have investigated the relationship between servant leadership and employees' mental health. In some studies, job satisfaction, as a facet of subjective well-being, was investigated (Barbuto & Wheeler, 2006; Mayer et al., 2008), in other studies variables such as job stress (Jaramillo et al., 2009) or short and long-term indicators of strain (Rivkin et al., 2014) were examined as dependent variables. In addition, Giolito et al. (2020) showed a relationship between servant leadership and employee flourishing. This thesis will go a step further regarding the relationship between servant leadership and employees' mental health: First, both employees' emotional exhaustion and flourishing are to be included as dependent variables in the sense of the two continua model of mental health. Second, this study aims to better understand the underlying psychological process. Among other researchers (Mayer et al., 2008; van Dierendonck et al., 2014), Chiniara and Bentein (2016) have conducted considerable research on the role of basic psychological needs and servant leadership. They used SDT (Ryan & Deci, 2000a) as a theoretical framework for autonomous motivation and argued that the leader's pronounced focus on the employees' personal interests fulfills their need for autonomy, relatedness, and competence (Chiniara & Bentein, 2016). They showed, e.g., that the relationship between servant leadership and task performance was mediated by competence need satisfaction, and the relationship between servant leadership and organizational citizenship behavior was mediated by autonomy and relatedness need satisfaction. Due to the need-satisfying effect of servant leadership in the examples shown, it can be deduced that this is a generic underlying process of servant leadership that functions by satisfying basic psychological needs:

Servant leadership, in its supportive and developmental nature, is predestinated to nurture autonomy, relatedness, and competence in the subordinates. For example, the empowerment dimension of servant leadership gives important responsibilities to their subordinates and they are encouraged to fulfill tasks and

develop solutions on their own, so they experience autonomy in their work (Chiniara & Bentein, 2016; van Dierendonck & Nuijten, 2011). The need for competence will e.g., be fulfilled by the humility, standing back and the empowerment dimension of the servant leader. This dimensions of van Dierendoncks and Nuijtens (2011) servant leadership model share some similarities with the “helping subordinates grow and succeed” dimension of Liden et al. (2008). These dimensions involve that servant leaders are genuinely interested in the subordinates career goals and know about their skills and potentials (Chiniara & Bentein, 2016). Hence, servant leaders can help and assist unfolding the potential of the subordinates, which, in turn, leads to fulfillment of the psychological need for competence. A positive relationship of servant leadership and perceived efficacy at group-level has already been shown (J. Hu & Liden, 2011). Servant leaders also fulfill the needs for relatedness to others by acting affiliative and building reliable, solid dyadic relationships with their subordinates, e.g., demonstrated by high levels of LMX (Chiniara & Bentein, 2016; Liden et al., 2008; Zou et al., 2015).

That the satisfaction of basic psychological needs goes hand in hand with eudaemonic well-being is a central component of the meta-theory (Ryan et al., 2013; Ryan & Deci, 2001). Ryan and Deci (2000a) summarized commanding results on the relationship between psychological need satisfaction and well-being. The results clearly show that fulfilled psychological needs lead to better well-being parameters and need diminishment is related to impaired well-being (ill-being). Hence, a high level of basic psychological need satisfaction is related to well-being. For this reason, SDT is suitable to describe psychological processes in the field of OHP.

The third study of this thesis empirically examines whether servant leadership has a direct correlation with leaders’ mental health, in the sense of the two continua model (emotional exhaustion and flourishing), and whether this relationship is mediated by psychological processes of SDT, namely the fulfillment of basic psychological needs.

Study 4: Does servant leadership always match with followers’ expectations? Like study 3, study 4 is also conducted at the employee level. Basically, the fourth study is a replication of the third study, i.e., the same mediation model with the same variables. In contrast to study 3, in study 4, boundary conditions (modera-

tors), characteristics of the employee, are additionally integrated into the conceptual research model to uncover possible strengthening or weakening effects alongside the psychological process between servant leadership and the employees' mental health. The fourth study thus fulfills two objectives: Firstly, the data of the third study will be replicated on a further sample, which ideally confirms the results of study 3. Secondly, a clear contribution of the study to theory and practice will be made by examining potential moderators.

When it comes to moderators of the relationship between servant leadership and outcomes, prototypes of the ideal leader are salient employee characteristics with the potential to influence existing relationships (Liden, Panaccio, et al., 2014; Panaccio, Donia, et al., 2015). First results of empirical research support the use of implicit leadership theories (Epitropaki & Martin, 2004), e.g., it could be shown that servant leadership led to reduced OCB and lower task performance when the employee's desire for servant leadership was low (Meuser et al., 2011). Furthermore, servant leadership was associated with reduced leadership avoidance if the ideal leadership prototype was congruent to the servant leadership concept (Lacroix & Pircher Verdorfer, 2017). The moderating effect of implicit leadership theories on the relationship between servant leadership and the employees' mental health has not yet been investigated in the field. Since this theory (Epitropaki & Martin, 2004; Epitropaki et al., 2013) has great potential to explain why there are inter-individual differences in the effect of leadership theories, the fourth study will examine leadership prototypes as moderators.

Each employee has individual implicit leadership prototypes (Epitropaki & Martin, 2004), which can be congruent or incongruent to servant leaders' attributes and behaviors. Depending on the individual socialization of the employee, the ideas of a leader may differ between prototypical traits (e.g., intelligent, honest and understanding) and anti-prototypical traits, like dishonesty and authoritarian (Epitropaki & Martin, 2004). If employees' implicit leadership theory is not congruent to the leader's constitution, there can be a diminishing effect on leadership effectiveness. In the case of servant leadership, it is proposed that subordinates with high leader anti-prototypes negatively influence the positive effects of servant leadership on psychological need satisfaction and their downstream outcomes, like low emotional exhaustion and high flourishing. To put in a nutshell, it

is assumed that employees' leader anti-prototypes are absorbing the positive effects of servant leaders for employees' mental health.

Towards the big picture: The overarching conceptual research model. It is important to integrate the isolated studies into an overall picture and to put the pieces of the puzzle together. As described above, studies 1 and 2 focus on servant leadership and leaders' mental health. Studies 3 and 4, focus on servant leadership and the employees' mental health as well as their psychological processes and boundary conditions. The overarching conceptual research model shown in figure 24 illustrates the interrelationships between the different studies and highlights the research contributions with the different foci (leader and employee). Altogether, it should be made clear that servant leadership as an independent variable, as well as emotional exhaustion and flourishing as dependent variables, are central subjects of research in this thesis. Furthermore, calls for future research were taken up that both antecedents, psychological processes (mediators), and boundary conditions (moderators) should be integrated into research designs (e.g., Eva et al., 2019; Xu et al., 2020).

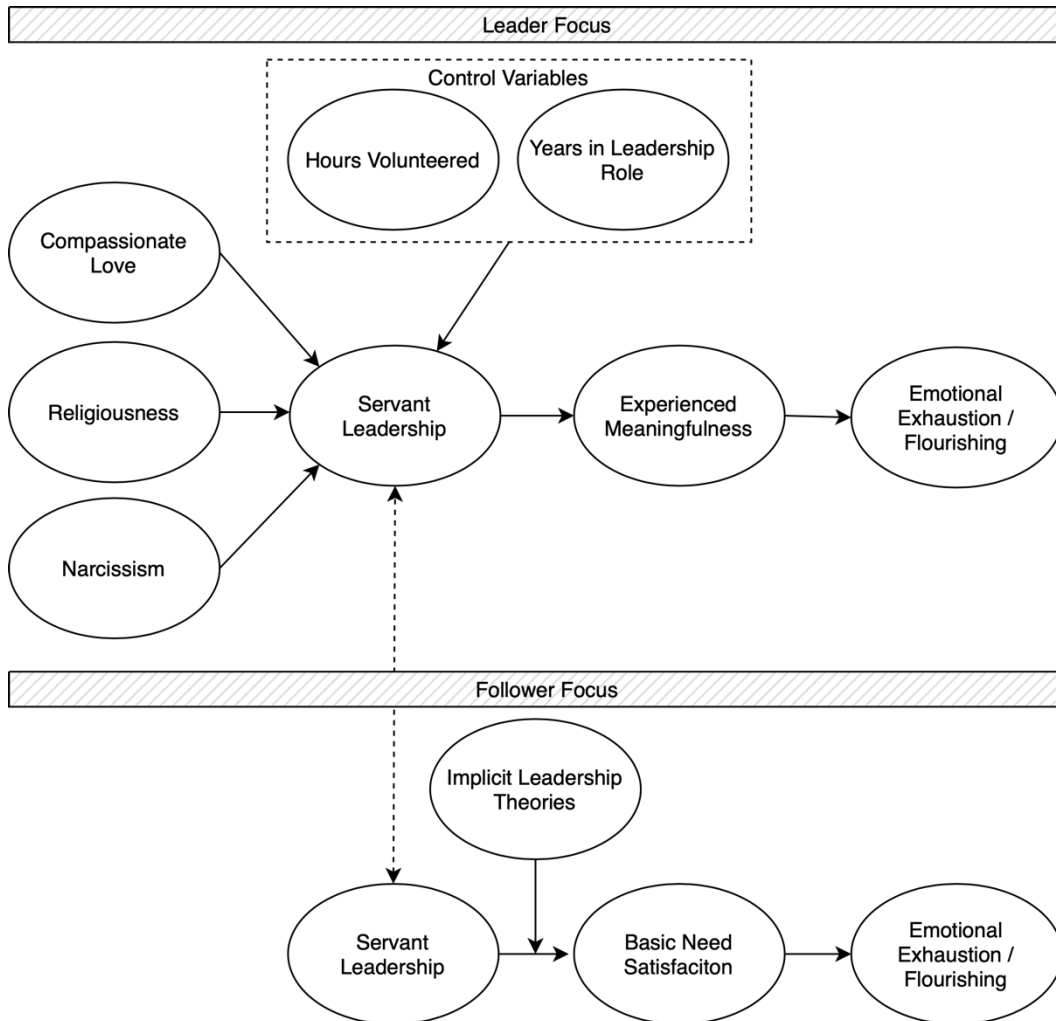


Figure 24: Overarching Conceptual Research Model

4.3 METHODOLOGICAL CONSIDERATIONS

Before starting the empirical-practical part of this thesis in the next chapter, general, overarching methodological considerations are addressed in this chapter.

The generic structure of the empirical studies. From the perspective of the theory of science, this work follows the principles of falsificationism according to Popper (1934): He proposes a deductive, i.e., theory-driven, procedure that presupposes a theory. Proposed theories must be rigorously tested against strict cri-

teria. This can be achieved either through empirical observation or through experiments. Theories and hypotheses that do not pass this test are rejected. These results must be discussed, and new theories and hypotheses follow, so that a successive gain of knowledge is achieved.

Since the thesis follows this principle, the hypothesis development builds the first chapter in the respective studies. In this chapter, concrete, falsifiable hypotheses are formulated, which are derived from one or more theories. The development of hypotheses is followed by a description of the method. In the section on the method, the general methodological procedure is described, e.g., whether the procedure is experimental, or observation based. In addition, there is a detailed description of the sample, which includes the sample size, statistical measures of distribution and variance (mean, standard deviation, etc.) of socio-demographic data such as age, gender, etc. This section also describes the exact research design, i.e., how the data were collected (e.g., cross-sectional or longitudinal design). Furthermore, the measurement methods used are presented. In the case of survey-based data collection, as in this thesis, the psychometric measures used are described. The description of the method is followed by the results chapter. In the results chapter, any statistical analyses are performed, and the corresponding results are presented. The procedures to be used in statistical analysis depend on the hypothesis and on the method used. The results of the statistical analysis show whether the stated hypotheses need to be rejected or can be accepted. Finally, for each study conducted there is a chapter for the discussion of the results. This section discusses theoretical and practical implications as well as limitations and paths for future research. This structure is applied generically to all four studies to be conducted.

Research designs and procedures. Whilst the detailed research design of the individual studies is described in the chapters on the respective studies, this section is used to present overarching ideas and thoughts on research design and data collection procedure.

First, the question arose whether the data should be obtained experimentally or based on observations. Even if experimental research in psychology has advantages, such as deriving causal inferences by manipulating the independent variable, it is common practice in both OHP and leadership psychology to collect

data using surveys. Although there are also calls for more experimental research in leadership research (Antonakis, 2017), I have decided to use a questionnaire-based data collection for the following reasons: First, the research published to date from original papers and meta-analyses provides a profound basis of existing knowledge on the constructs under investigation, based on measures that are loaded onto latent variables (constructs) using items as manifest variables. This offers the possibility to use existing empirically validated psychometric measures, which ensure an incremental increase in knowledge, since the studies of this thesis measured the same phenomena (leadership style and mental health parameters) as in previous studies. Second, there are possibilities to mitigate known weaknesses of questionnaire-based research, such as common method biases (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Third, there are organizational and economic aspects that have favored the decision for a questionnaire-based approach. The sum of the arguments in favor of questionnaire-based data collection was decisive. Limitations that have arisen from the way data has been collected will be discussed in the respective studies.

Second, in the research design it is important to specify whether the investigation is cross-sectional or longitudinal. It is important to define the source by which the variables are to be assessed (self-assessment or others-assessment). Classical cross-sectional studies are susceptible to common method biases, as common rater and measurement context effects can distort these (Podsakoff et al., 2003). In renowned outlets of work and organizational psychology, such as the *Journal of Applied Psychology* and *Personnel Psychology*, in the 1970s and 1980s about 51% of the studies were conducted with self-report measures, i.e., were susceptible to common rater biases, and about 39% of the studies collected data in the same measurement context (e.g., time), which leads to methodological effects due to the measurement context (Sackett & Larson, 1990). Besides statistical methods, procedural remedies can also control susceptibility to common method biases (Podsakoff et al., 2003): Besides obtaining measures of the dependent and independent variable(s) from different sources, temporal, methodological or psychological separation of the measurement can be performed. Ensuring the anonymity of the test subjects is also considered a means of controlling common method variance (ibid.). For this reason, different sources are used in the surveys of this thesis (leader and employee, especially for studies 1 and 2), and time lags

are built into the survey of study 3. Study 4 is conducted cross-sectionally, without different raters and without time lags, since moderator effects are less prone to common method variance (Dormann, Brod, & Engler, 2017). Anonymity was always guaranteed. Using a so-called shortitudinal design, i.e., several measurement points with short, not longitudinal time lags, has proven to be useful in empirical social research (Dormann & Griffin, 2015) and also for leadership research in particular, since influences of the leader on the employee are more likely to be seen in short-term rather than long-term time lags (van Dierendonck et al., 2004). The separation of sources in the measurement of dependent and independent variables is not only useful to reduce common rater biases (Podsakoff et al., 2003), but it has been shown that there are only moderate correlations between self-assessment (leader) and others-assessment (employee) regarding leadership style (Angela Lee & Carpenter, 2018). Since leadership research strongly depends on how the leadership behavior is perceived by those being led, it is advisable to obtain the leadership style from the employees by an others-assessment. In summary, I can say that cross-sectional or shortitudinal designs are common in leadership research. Even though there are limitations in terms of causality, especially for cross-sectional research design, this design still seems to be an appropriate approach, especially if the theory can provide a solid framework of cause and effect.

Since I decided to collect data using online surveys, it was necessary to select a suitable software solution. The decision was finally made in favor of the website SoSciSurvey.de (Social Science Survey; <https://www.soscisurvey.de>). This decision can be justified by the following aspects: I had previous knowledge of this website, as I had already used it for data collection in my master thesis. The website is free of charge for academic purposes. The website is based on the non-proprietary programming language PHP and allows flexible programming of PHP code snippets for individual needs. This ensures a maximum of flexibility within a standard software. Technically, this allows several sources of measurement, e.g., questionnaires of the leader and the employee, to be linked together by means of unique identifiers. Also, the technical challenges of a shortitudinal design can be solved by SoSciSurvey.de. In general, the fact that I hold a Bachelor of Science degree in Business Informatics and I am also professionally active in an IT-related field helped me designing and implementing the questionnaires.

Analytical strategy. As mentioned above, the statistical method will follow the formulated hypothesis and the scale level of the measured variable. The exact statistical test or method can therefore only be determined when both hypothesis and scale level are known. This will be done in the respective chapters of the individual studies. The open source software R, including different packages like lavaan, psych, semTools, etc., is used for all statistical analyses of this thesis (R Core Team, 2019). As usual in the social sciences and psychology, the statistical tests are performed with a 95% confidence interval (CI), i.e., p -values smaller than or equal to .05 are considered statistically significant. In principle, for each scale used, reliability is reported using Cronbach's alpha (Cronbach, 1951). Since Cronbach's alpha depends on the obtained sample of the respective study, it is common practice not to rely on alpha values of published papers but to determine alpha for the sample each time (Streiner, 2003). In order to determine the discriminant validity of the latent variables contained in the measurement model, the following procedure is proposed (Farrell, 2010):

- Conducting a confirmatory factor analysis (CFA) to be able to confirm the factor structure using alternative models. Here, modification indices and error terms can indicate cross-loadings.
- The average variance extracted (AVE) should be determined for each construct and taken from the correlation matrix of the structural equation model with the shared variance to ensure that error terms are also taken into account (Fornell & Larcker, 1981). Discriminant validity can be assumed if the AVE is greater than the maximum shared variance (ibid.). The AVE should be greater than .50 in order to assume convergent validity of the construct (Fornell & Larcker, 1981; Hair, Black, Babin, & Anderson, 2014). An AVE greater than .40 can be accepted if the composite reliability of the corresponding construct is greater than .60 (cf. Huang, Wang, Wu, & Wang, 2013).

If the discriminant validity is not sufficient, different approaches are proposed to address this problem (Farrell, 2010), e.g., introduction of a common method factor to reduce variance inflation (Podsakoff et al., 2003). Often, however, the poor discriminant validity is due to cross-loading items that can be removed if necessary, whereby the trade-off between the number of items per scale

and the number of scales must always be considered in the item removal test (Farrell, 2010). In case the issues persist, it may be considered to combine multi-dimensional constructs, e.g., transformational or servant leadership, into a single construct instead of a dimension-by-dimension analysis (*ibid.*). However, this option is only appropriate if the underlying theory allows for a consolidation (*ibid.*).

After the reliability of the constructs and their discriminant validity has been tested using factor analytical methods, further statistical methods are applied to test the hypotheses. The (multiple and/or stepwise) ordinary least squares (OLS) regression analysis but also more complex methods like structural equation modelling (SEM) are used. In case of SEM, the fundamental question of the method to be used arises: In principle, a distinction is made between covariance-based structural equation models (CBSEM) and variance-based structural equation models (VBSEM), which are based on partial least squares (PLS; Davcik, 2014). Since CBSEM is strictly theory-driven, with a confirmatory character, and the latent constructs are typically composed of reflective indicators, which is characteristic for psychometric studies, this procedure will be applied in this thesis (*ibid.*). Compared to VBSEM, CBSEM is more rigorous in terms of the requirements for sample size (*ibid.*). It is therefore necessary to have a general estimate of the sample size for the survey phase. For CBSEM, the ratio of sample size to free model parameters should be at least five observations to one free model parameter, ideally 10 to 1 (cf. Baumgartner & Homburg, 1996). For the management literature in the period from 1977 to 1994 it could be shown that this ratio was 6.4:1 in the analyzed studies, i.e., an average of 6.4 observations in the sample per free model parameter (Baumgartner & Homburg, 1996). At the same time, it is noted that the sample size depends on various factors, e.g., psychometric properties of the variables, strength of the relationships between the variables and complexity and size of the measurement and structural model (Marcoulides & Saunders, 2006). For this reason, the statistical analysis of the respective studies always examines whether, for example, the dimensional structure of a construct can be aggregated to a latent, higher-order construct. This would apply, for example, to servant leadership as a dimensional construct. It is possible to include servant leadership with its individual dimensions in the measurement and structural model, which not only increases the level of detail of the analysis, but also the free model pa-

rameters. On the other hand, only the higher-order servant leadership construct could be included in the measurement and structural model, which would reduce the complexity and the free model parameters and thus reduce the requirements regarding sample size. In particular, if the hypotheses developed and the underlying theory do not indicate the need to model paths from or to these dimensions in the structural model, it would be necessary to check whether these dimensions are modelled as a higher-order latent construct servant leadership in favor of the model's parsimony (Farrell, 2010). The same applies to other higher-order latent constructs that are designed multidimensionally, e.g., basic need satisfaction on the level of the three basic psychological needs autonomy, competence, and relatedness. For all CFAs and CBSEMs χ^2 and $\Delta\chi^2$, as well as comparative fit index (CFI), Tucker-Lewis index (TLI) and root mean square error of approximation (RMSEA) are reported as indices of model fit. Models are have a proper fit if CFI and TLI are at least .90, and RMSEA is .08 or lower (Hu & Bentler, 1999).

5 EMPIRICAL STUDIES

“The great tragedy of science, the slaying of a beautiful hypothesis by an ugly fact.”

Thomas Henry Huxley, Biologist & Anthropologist

5.1 WHY DO LEADERS ENGAGE IN SERVANT LEADERSHIP? THE ROLE OF COMPASSIONATE LOVE AND RELIGIOUSNESS AS DISPOSITIONAL ANTECEDENTS

5.1.1 Hypothesis Development

Although psychological constructs such as narcissism, agreeableness, extraversion, mindfulness, emotional intelligence and a few other factors have already been investigated (Xu et al., 2020), it is still necessary to gain a deeper understanding of the preconditions for this kind of leadership from the perspective of the leader. An important theoretical contribution to this question was made by van Dierendonck and Patterson (2015), who presented compassionate love as a cornerstone of servant leadership in their theoretical-conceptual publication. While the various systematic literature reviews and meta-analyses are mostly based on research contributions that have also carried out empirical studies, compassionate love does not appear as an antecedent of servant leadership in any nomological network (e.g., Eva et al., 2019; Xu et al., 2020). Therefore, I decided to empirically investigate compassionate love as an antecedent of servant leadership. Based on the theoretical foundation of van Dierendonck and Patterson (2015) and the theory of purposeful work behavior (Barrick et al., 2013), first results of my empirical study have already been published (Brouns et al., 2020). In order to expand the theoretical and practical contribution, the aim of this study is to examine the concept of compassionate love and narcissism as a psychological antithesis introduced by Brouns et al. (2020) and to analyze the incremental value of compassionate love. Furthermore, to what extent leaders' religiousness determines whether he or she behaves in a servant way towards his or her employees will be examined (Wong & Page, 2003). The investigation of both independent

variables (compassionate love and religiousness) would not only make a theoretical contribution to the widening of the nomological network of servant leadership, but would also have the practical merit, for example, of using screening methods for the recruitment of new leaders, which take compassionate love and religiousness as well as narcissism, as part of the dark triad (Grijalva, Harms, Newman, Gaddis, & Fraley, 2015), into consideration.

Narcissism and servant leadership. Narcissism is a construct that has a very long tradition, not only in various disciplines of psychology, including clinical psychology, industrial and organizational psychology, but also social psychology in general (Gentile et al., 2013). In the field of industrial and organizational psychology, narcissism is regarded as a personality trait in its subclinical manifestation and not as a personality disorder. Narcissism is characterized by a grandiose self-confidence, a sense of entitlement and dominant-antagonistic interpersonal social behavior (ibid.). Research also suggests that narcissism is a heterogeneous construct composed of vulnerable and grandiose dimensions (e.g., Dickinson & Pincus, 2003; Miller & Campbell, 2008; Wink, 1991), with research focusing more on the grandiose dimensions (Gentile et al., 2013). The entitlement/exploitativeness dimension can be seen as the one that most strongly suggests narcissistic personality pathology, as this dimension represents the socially toxic aspects of the Narcissistic Personality Inventory (NPI), which has been shown to be negatively correlated with extraversion and self-esteem, and positively correlated with neuroticism and mood variability (Ackerman et al., 2011; Emmons, 1984, 1987; Gentile et al., 2013). In comparison, the dimensions leadership/authority and grandiose exhibitionism are markers for grandiose narcissism, as they were positively associated with extraversion and self-esteem and negatively associated with neuroticism (Ackerman et al., 2011). Also, the discourse on whether narcissism is a category, or a continuum could be answered in the sense that trait narcissism exists on a continuum, since no quantitative shift from “normal” to “narcissist” could be shown (Foster & Campbell 2007).

Research on the relationship between leadership and narcissism is not a fad but looks back on many years of research (Higgs, 2009; Resick, Whitman, Weingarden, & Hiller, 2009), which is also reflected in a comprehensive meta-analysis by Grijalva et al. (2015). In summary, this meta-analysis found the fol-

lowing (Grijalva et al., 2015): In this study, leadership was viewed from two perspectives, namely emergence of leadership and leadership effectiveness. Regarding the former, it was found that narcissistic personalities are more likely to take a leadership role. The researchers attributed this to the conceptual overlap between the subclinical manifestation of narcissism and the personality dimension extraversion. Consequently, narcissists rise into leadership positions faster because they display a higher degree of extraversion. Regarding the effectiveness of leadership in subclinical narcissists, it was shown that there is only a significant linear relationship when narcissistic leaders self-assess their effectiveness. This statistical relationship was no longer observable when the self-reports of effectiveness were replaced by others-reports. This is an indication that narcissists tend to overestimate themselves. Upon closer analysis, a U-shaped curvilinear relationship between narcissism and leadership effectiveness was shown, indicating that a moderate degree of subclinical narcissism is most conducive to leadership effectiveness.

Following the theoretical elaboration of Brouns et al. (2020), reference is made to the theory of purposeful work behavior (Barrick et al., 2013). This theory states that leaders' personality traits trigger purposeful efforts in work behavior. As described above, it is typical for narcissists to be more extraverted and less agreeable (Bradlee & Emmons, 1992). In the sense of the theory of purposeful work behavior, this would imply that the leaders' motives are rather agentic and less communion-oriented (Campbell, Rudich, & Sedikides, 2002). Therefore, narcissists are less motivated to adopt an others-oriented leadership style, such as servant leadership, as this would require strong communion-striving, which is not in line with their personality and motives (Barrick et al., 2013). Therefore, narcissists would feel less sense and purpose in behaving in this way in a leadership role. Nor are narcissists willing to subordinate their personal interests to the interests of others, e.g., their employees, which is a theoretical core element of servant leadership (Liden et al., 2008; van Dierendonck, 2011). Because of the omnipresent self-love typical of narcissists, it can also be assumed that narcissistic leaders are not inclined to demonstrate other central dimensions of servant leadership, such as standing back, forgiveness and humility (S. J. Peterson et al., 2012). Therefore, the following hypothesis is proposed:

Hypothesis 1. Leaders' narcissism is negatively associated with servant leadership behavior.

Compassionate love and servant leadership. Sprecher and Fehr (2005) noted that love in romantic relationships has been extensively researched in recent decades, whereas love for close others, such as family and friends, but also humanity as a whole, has not received much attention in research. According to the definition of Sprecher and Fehr (2005), compassionate love is understood as a focus on others, "either close others or strangers or all of humanity; containing feelings, cognitions, and behaviors that are focused on caring, concern, tenderness, and an orientation toward supporting, helping, and understanding the other(s), particularly when the other(s) is (are) perceived to be suffering or in need" (p. 630). The following five key characteristics form the framework of compassionate love (Underwood, 2008): freedom of choice for the other; faithful cognitive understanding of social situations, the other and oneself; appreciation of the other at a fundamental level; empathy and openness; and the response of the "heart". In light of other related concepts, such as empathy, compassionate love is different in that it is both more comprehensive and more stable (Sprecher & Fehr, 2005).

This deep-rooted compassionate love for non-intimate others, such as a leader's employees, is fully in line with the ideology of servant leadership and reflects the so-called "servant-first" approach that is the character of this leadership theory and has been proposed since Greenleaf's early conceptualizations of servant leadership (1977). To recapitulate this approach briefly, the following quotation from the writings of Greenleaf (1977) is given: "The Servant-Leader is servant first. [...] It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead" (p. 7). The servant leader shows compassionate love towards their employees in order to learn more about their personality, individual strengths and weaknesses and their emotional states (van Dierendonck & Patterson, 2015). Leaders who feel compassionate love for their employees naturally put the talents and interests of their employees first and assign a subordinate role to organizational goals and their own interests (ibid.). For this reason, compassionate love has been described as a real-world expression and at the same time as a critical precondition in the organizational context of the core principle of servant leadership, namely the need to serve (Greenleaf, 1977;

van Dierendonck & Patterson, 2015). Following the theoretical argumentation of Brouns et al. (2020), the theory of purposeful work behavior can also be applied here (Barrick et al., 2013). Individuals who show a high degree of compassionate love will be committed to the higher-order goal of communion-striving and, once they have been promoted to a leadership position, will show servant leadership, as this is congruent with the individual's personality (high agreeableness) and prosocial identity, and thus results in the sense of purpose and meaning (Barrick et al., 2013; Brouns et al., 2020). Furthermore, van Dierendonck and Patterson (2015) argued that compassionate love triggers moral emotions, which are always related to the good or interests of the community or another person and not to oneself (Haidt, 2003), which is in line with the underlying idea of servant leadership, having a genuine interest in the good of others (Greenleaf, 1977). Taking these theoretical arguments together, the following hypothesis is put forward:

Hypothesis 2. Leaders' compassionate love towards non-intimate others is positively associated with servant leadership behavior.

Religiousness and servant leadership. There has been a discourse in social psychology about the dimensions of religious orientation or religiosity, with Allport (1950) offering a first distinction between immature and mature religiosity: The religiousness of an individual was understood as a developmental stage ranging from immature to mature, whereby not necessarily every adult person had to reach the stage of maturity. This distinction was later reformulated into the conceptualization of extrinsic and intrinsic religious orientation still common today (Allport & Ross, 1967):

“Perhaps the briefest way to characterize the two poles of subjective religion is to say that the extrinsically motivated person *uses* his religion, whereas the intrinsically motivated *lives* his religion. As we shall see later, most people, if they profess religion at all, fall upon a continuum between these two poles” (p. 434).

Hence, the extrinsic orientation is less reflected and guided by anxiety or instrumental motives and goals, whereas the intrinsic orientation is reflected and follows unselfish higher-order goals (Allport & Ross, 1967). Intrinsic orientation is

characterized by a superior sense of morality, purpose in life and understanding, which is nourished by reflection and doubt (Allport & Ross, 1967; Haji & Hall, 2014). The model of extrinsic and intrinsic orientation of religiousness refined by Allport and Ross (1967) has also been criticized as being incomplete. In particular, it was noted that while intrinsic orientation captures religious engagement, it does not capture the understanding arising from doubt and reflection (cf. Haji & Hall, 2014). Therefore, quest orientation was introduced to better capture this aspect so that religiousness was understood as three distinct dimensions (Batson, Schoenrade, & Ventis, 1993): extrinsic orientation, which understands religion as a means to an end; intrinsic orientation, which understands religion as an end to itself; and quest orientation, which is to be regarded as a journey towards religious understanding. In this context, quest orientation plays a particularly important role for tolerance, whereby Batson et al. (1993) explicitly emphasized that the various orientations are dimensions that can be combined to describe a person's religiousness and not a strict typology that only allows for one or the other orientation. As practical examples for people with a strong quest orientation, they included public figures such as Gandhi, Malcolm X and Siddhārtha Gautama (Buddha).

In empirical research, quest orientation is next in line with Allport's (1954) assumption that religion can serve as a firewall for prejudice. Thus, quest orientation in religiousness was negatively correlated with prejudices regarding sexual orientation, race and religion (Leak & Finken, 2011). Earlier research in the experimental setting has already demonstrated this (Batson, Flink, Schoenrade, Fultz, & Pych, 1986): A religious openness (quest orientation) had a negative correlation with racial prejudices of white participants, both in an overt and covert state. In both states the respondent had to choose between a theatre with a white person or a theatre with a black person. In the open state the same film was shown at both theatres, in the covert state different films were shown at both locations. Intrinsically oriented persons showed a clear preference for sitting near a white person in the open state, compared to quest-oriented persons, whereas in the covert state no preference could be shown. Systematic reviews could also show this connection, that quest orientation is negatively linked to intolerance, whereas intrinsic and extrinsic orientation show positive connections (Hunsberger & Jackson, 2005). The results for religious fundamentalism are particularly clear: here all studies were

positively linked with intolerance towards other ethnic groups, sexual orientations, religious out-groups, etc. (ibid.). In a vignette study Haji and Hall (2014) were able to show that quest orientation acts as a buffer against fundamentalist negative outgroup attitudes. In a meta-analysis it could also be shown that quest orientation to religion is negatively linked to prejudice and authoritarianism (McCleary, Quillivan, Foster, & Williams, 2011), whereby authoritarianism is to be understood as a combination of conventionalism, aggression and suppression triggered by authorities (Altemeyer, 1981). Research on tolerance and neighbor love also suggested (Batson, Floyd, Meyer, & Winner, 1999) that quest orientation to religion is related to the broad concept of neighbor and is manifested in the universal compassion of the Good Samaritan (Batson, Eidelman, Higley, & Russell, 2001).

With regard to the consistency between servant leadership and religious beliefs, Wallace (2007) has published a comprehensive article. He concluded that there is a high degree of compatibility between a biblical worldview and servant leadership because it affirms human dignity, strengthens community by fostering compassion and addressing people's personal needs, promotes justice and critically questions power. All these characteristics, such as freedom from prejudice, anti-authoritarianism and compassion, which are attributed to religious people, are found in empirical studies as correlates to religious quest orientation (e.g., Leak & Finken, 2011; McCleary et al., 2011), which understands religion as a journey to religious understanding (Batson et al., 1993). From this it can be concluded that from both a theoretical perspective, and from an empirical perspective, the following hypothesis regarding religiosity and servant leadership can be derived:

Hypothesis 3. Leaders' religious quest orientation is positively associated with servant leadership behavior.

Incremental value of "love-related" variables on servant leadership. Brouns et al. (2020) discussed that it is important to look at the antecedents additionally in an overall view to see how the incremental value of the different constructs is and which model explains the greatest amount of variance in servant leadership. The bilateral approach of Brouns et al. (2020), which introduces compassionate love as

the theoretical core of servant leadership and narcissism, unconditional subclinical self-love, as the conceptual antithesis, provides a good basis for going one step further. In terms of servant leadership, compassionate love does not appear to be a mere antithesis to narcissism but more than that: narcissists lack central elements of servant leadership through their grandiose self-perception, the sense of entitlement and their dominant and antagonistic nature in social behavior, which leads me to assume from a theoretical perspective that there is a negative relationship between the two constructs (Gentile et al., 2013). Compassionate love, on the other hand, assumes, in the theoretical conceptualization of the construct, that all these negatively connoted personality characteristics of a narcissist are not or cannot be present to enable the feeling of compassionate love for other people. Thus, not being a narcissist is a prerequisite for being able to feel compassionate love. In addition, the idea of compassionate love goes further and implies that those persons with strong compassionate love for others include feelings and behaviors such as caring and having a general orientation towards help and support (Sprecher & Fehr, 2005). Therefore, it can be assumed that compassionate love explains a substantial proportion of the variance in servant leadership. In addition, compassionate love is expected to explain further variance in servant leadership that goes beyond narcissism, demonstrating that compassionate love is a cornerstone of servant leadership (van Dierendonck & Patterson, 2015). Therefore, the following hypothesis is put forward:

Hypothesis 4. Compassionate love will account for incremental variance in servant leadership beyond narcissism.

5.1.2 Method

Participants, procedures, and design. The data collection for study 1 was planned as a cross-sectional survey, i.e., there were no repeated measurements. The variables narcissism, compassionate love and religiousness were rated by the leader, and servant leadership, as a dependent variable, was rated by an employee of the leader. I chose a dyadic research design in which leadership behavior was assessed by an employee. This is because a study demonstrated that the statistical correlations between self- and others-assessment of leadership behavior

are only moderate (Angela Lee & Carpenter, 2018). Although Angela Lee and Carpenter (2018) were able to show in their study that the assumption of a self-enhancement bias by the leader is not tenable, I am convinced that leadership research is primarily concerned with how leadership is perceived by those being led (employees). Consequently, others-assessments of leadership behavior appeared to be more suitable. Furthermore, it seems appropriate to have the independent variables self-rated by the leader due to their conceptual proximity to his or her personality (Conway & Lance, 2010). Additionally, this research design offers the advantage of being less prone to common source bias (Podsakoff et al., 2003; Podsakoff & Organ, 1986). The survey was conducted in 2019 among part-time students at a large German university of applied sciences. I promoted the acquisition of the study participants with the help of e-mails and face-to-face lectures. The sample comprised a total of 170 participants who were seeking a bachelor's degree parallel to their profession. Since the students were in an employment relationship, dyads could be formed between employee and leader or vice versa. The dyads were always represented as 1:1 relationship between employee and leader, which implies that the number of participants ($n = 170$) also corresponds to the number of dyads in the sample. The data are not nested. The collection of the data with the tool SoSciSurvey.de was technically implemented as follows: Participation was designed bidirectionally, i.e., students could participate regardless of their individual role in the company (leader or employee). Depending on whether the student has a leader or employee role, a corresponding link including a primary key was generated at the end of the survey, which referred to the respective other questionnaire (e.g., if the student is not a leader, the link for the leader questionnaire was generated). Only when both participants of a dyad (leader and employee) had completely filled out the questionnaire, a valid data set for the analysis was generated. The leaders in the collected sample were on average 41 years old ($SD = 11$). The employees were 28 on average ($SD = 7$). Regarding the gender distribution, it was found that there was a slightly higher prevalence for men in the category of leaders and a higher prevalence for women in the category of employees. The descriptive statistics for age and gender in both categories can be found in table 7 (see also Brouns et al., 2020).

Table 7: Study 1: Means and Standard Deviations of Age and Gender (Leaders and Followers)

Variable	M (Leader)	SD (Leader)	M (Employee)	SD (Employee)
Age	40.51	10.64	28.12	7.10
Gender	1.58	0.50	1.29	0.45

Note. $n = 170$. Gender 1 = female, 2 = male.

Psychometric scales. In study 1, the following psychological constructs had to be measured to test the hypotheses put forward: Narcissism, passionate love, and religiousness, (especially the dimension of religious quest orientation) as independent variables and servant leadership as dependent variable. The items of the scales used can be found in appendix A1. Potential control variables were also surveyed. In the following, the scales used for each of the constructs listed are presented.

Narcissism: Narcissistic Personality Inventory–13 (G-NPI-13). To measure the subclinical form of narcissism, I used the German version of the shortened Narcissistic Personality Inventory, the so-called G-NPI-13 (Brailovskaia, Bierhoff, & Margraf, 2017). The scale comprises 13 items, which are measured on a 5-point Likert scale. The scale is composed of three dimensions, namely leadership/authority (LA), grandiose exhibitionism (GE) and entitlement/exploitativeness (E/E; Brailovskaia et al., 2017). Example items of G-NPI-13 are “Power is very important to me” (LA), “I like to show off my body” (GE) and “I will never be satisfied until I get everything I deserve” (EE). After two very low loading items (item 3 of the LA dimension and item 5 of the GE dimension) were removed during the factor analysis, the composite reliability (CR) for the higher-order construct narcissism was $CR = .83$ and the total AVE was $.42$. Cronbach’s alpha is not reported for multidimensional constructs at the level of the higher-order construct, instead CR (ω) is reported (Gignac, 2014; R. A. Peterson & Kim, 2013; Viladrich, Angulo-Brunet, & Doval, 2017; Watkins, 2017). At the dimensional level, reliability was as follows, LA ($\alpha = .66$; $CR = .72$; $AVE = .50$), GE ($\alpha = .77$; $CR = .69$; $AVE = .42$), and EE ($\alpha = .68$; $CR = .68$; $AVE = .36$). The reliability at the

dimensional level in the sample collected in this study exceeds the alpha coefficients reported by Brailovskaia et al. (2017).

Compassionate love: Santa Clara Brief Compassion Scale (SCBCS). Sprecher and Fehr (2005) have laid the conceptual foundations for compassionate love, distinguishing between compassionate love for close others and compassionate love for non-intimate others. Based on these two contexts, some argue measuring the construct of compassionate love for non-intimate others is appropriate for the leadership context. For example, even if LMX theory assumes that the closest possible relationships between leader and employee are to be cultivated (Graen & Uhl-Bien, 1995), it can be assumed that these relationships cannot be equated with relationships to close others because of the occupational context. Although van Dierendonck and Patterson (2015) note that ideally a compassionate love scale should be developed for the leadership context, I am convinced that compassionate love in the leadership context is to be equated with compassionate love for non-intimate others. For this reason, I have used the SCBCS (Hwang, Plante, & Lackey, 2008), which measures compassionate love for non-intimate others with only 5 items on a 7-point Likert scale, efficiently. Example items are “When I hear about someone (a stranger) going through a difficult time, I feel a great deal of compassion for him or her” and “I would rather engage in actions that help others, even though they are strangers, than engage in actions that would help me”. Since the items were only available in English (Hwang et al., 2008), all items were translated into German by me and back translated into English by a third person as described by the back-translation method to ensure consistency in the translation process (Brislin, 1970). Hwang et al. (2008) reported a reliability of $\alpha = .90$. In the present sample, the following values were determined for the reliability and convergent validity of the scale: $\alpha = .84$, CR = .78 and AVE = .50.

Religious quest orientation: New Indices of Religious Orientation (NIRO). The NIRO scale consists of three different dimensions, external (EO), internal (IO), and quest orientation (QO) to religion (Francis, 2007). The scale was validated in a long and short form. In its complete form, the scale comprises 9 items per dimension, i.e., 27 items in total. In the short form, each dimension is reduced by 3 items, i.e., 6 items per dimension and 18 items in total. In Francis' (2007) scale de-

velopment, the dimensions of the full form had the following reliabilities $\alpha = .84$ for EO, $\alpha = .91$ for IO and $\alpha = .85$ for QO. In the short form, the following reliabilities were found for the dimensions of religious orientation: $\alpha = .81$ for EO, $\alpha = .89$ for IO and $\alpha = .81$ for QO. Due to the small differences in the Cronbach's alpha coefficients between the full and short form, I decided to use the short scale for reasons of test economy. Since only QO is examined for this study, only this dimension of religious orientation was surveyed. The 6 items were answered on a 5-point Likert scale. Example items are "I was driven to ask religious questions by a growing awareness of the tensions in my world", "For me, doubting is an important part of what it means to be religious" or "As I grow and change, I expect my religion to grow and change as well" (Francis, 2007). As the items were only provided in English (Francis, 2007), all items were translated into German by me and back-translated into English by a third person, as described by the back-translation method, to achieve consistency in the translation process (Brislin, 1970). In the sample surveyed, the following measures of reliability and convergent validity were determined: $\alpha = .88$, CR = .86 and AVE = .55. Cronbach's alpha thus exceeds the value from Francis' (2007) study, even the value of the full form ($\alpha = .85$).

Servant leadership: Servant Leadership Survey (SLS). As already described in chapter 2.3.2, I decided to use the SLS (van Dierendonck & Nuijten, 2011) in the version validated in German (Verdorfer & Peus, 2014). The whole questionnaire consists of 30 items and is divided into 8 dimensions: empowerment, standing back, accountability, forgiveness, courage, authenticity, humility, and stewardship (van Dierendonck & Nuijten, 2011; Verdorfer & Peus, 2014). Example items of the scale are "My manager helps me to further develop myself", "My manager is not chasing recognition or rewards for the things he/she does for others", "If people express criticism, my manager tries to learn from it" or "My manager shows his/her true feelings to his/her staff". After checking the modification indices, item 19 ("My manager is open about his/her limitations and weaknesses") was removed from the measurement model because it had cross-loadings to other dimensions. For the higher-order construct servant leadership, consisting of the 8 dimensions mentioned, a CR = .95 and an AVE = .59 could be determined. Cronbach's alpha is not reported for multidimensional constructs at the level of

the higher-order construct, instead CR (ω) is reported (Gignac, 2014; R. A. Peterson & Kim, 2013; Viladrich et al., 2017; Watkins, 2017). At the dimensional level, reliability in the present sample was as follows: empowerment ($\alpha = .90$; CR = .89; AVE = .59), standing back ($\alpha = .70$; CR = .70; AVE = .45), accountability ($\alpha = .83$; CR = .84; AVE = .63), forgiveness ($\alpha = .78$; CR = .78; AVE = .55), courage ($\alpha = .82$; CR = .87; AVE = .78), authenticity ($\alpha = .82$; CR = .83; AVE = .63), humility ($\alpha = .93$; CR = .91; AVE = .72), and stewardship ($\alpha = .70$; CR = .69; AVE = .43). All alpha values were comparable or better than in the validation study by Verdorfer and Peus (2014), which is an indication that the scale worked properly.

5.1.3 Results

The results of the statistical analyses are presented below. Starting with the validation of the measurement model by using a CFA, followed by the descriptive statistics and intercorrelation matrix and finally the testing of the developed hypotheses by means of suitable procedures, such as multiple regression analyses.

Measurement models. In the present dyadic study design, it is necessary to check both the entire measurement model, including all self- and others-assessed variables, with respect to the fit indices, i.e., χ^2 , CFI, TLI and RMSEA, with CFI and TLI $\geq .90$, and RMSEA $\leq .08$ (L. Hu & Bentler, 1999). Conversely, it is compulsory to check the discriminant validity between the different independent variables, narcissism, compassionate love, and religious quest orientation, which have been assessed by the leader. This is done with a so-called nested model comparison (Hutchens, 2017), i.e., two latent variables from the measurement model (e.g., narcissism and compassionate love) are combined into a single latent factor and then compared to the original model. This procedure is performed for all combinatory possibilities of the latent variables. If the χ^2 difference test is significant, the χ^2 from the merged model is significantly higher than the χ^2 of the baseline model, indicating discriminant validity between the two merged latent variables.

In the definition of the measurement model of G-NPI-13, a covariation between items seven and nine was allowed due to a high overlap in content. The same applies to the SCBCS and pairs formed from items one and two, as well as

items three and four. These pairs of items are formulated very similarly in terms of content and therefore correlate highly to each other. In the QO dimension of the NIRO, covariance was allowed for items 13 and 17 and for items 14 and 15. Finally, two covariances were also allowed in the SLS, namely between items five and six and between items 24 and 25. Here too, a high overlap in content was discernible. The CFA of this measurement model came to the following results: $\chi^2(1200) = 1645.35$, RMSEA = .05, CFI = .90, TLI = .90. The defined threshold values for an acceptable model fit were reached. Therefore, a good fit of the model can be assumed.

To test the discriminant validity, nested model comparisons were carried out, as described above. The original model with the independent variable's narcissism (NAR), compassionate love (CL) and religious quest orientation (QO) had the following fit indices: $\chi^2(198) = 273.83$, RMSEA = .05, CFI = .95, TLI = .94. All subsequent nested model comparisons are based on this model and compare it to the nested model. The results of the tests are shown in table 8. The results indicate that discriminant validity exists between the pairwise merged latent variables due to the significant increase in χ^2 values. Since there is a significant χ^2 difference test for all merged latent variables, discriminant validity can be assumed.

Table 8: Study 1: Nested Model Comparison with χ^2 -Difference Test

Model	Estimate	CI lower	CI upper	Df	Δ Df	χ^2	$\Delta\chi^2$
NAR~~CL	-.37	-.54	-.21	200	2	355.01	81.18***
NAR~~QO	-.03	-.21	.15	200	2	388.29	114.47***
CL~~QO	.10	-.06	.27	200	2	641.95	368.12***

Note. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

In addition, I calculated the AVE of the latent variables. As already reported in the section on psychometric scales, the AVE of narcissism, compassionate love and religious quest orientation were .42, .50, and .55, respectively. The maximum value from the squared correlations (maximum shared variance) of the latent variables, calculated directly from the measurement model including error terms, ranged between .01 and .14. Since all AVE are larger than the maximum shared

variance, we can also assume discriminant validity between the latent variables (Farrell, 2010; Fornell & Larcker, 1981). Since the AVE of narcissism is smaller than .50, it is advisable to additionally consider the CR regarding the convergent validity. The CR of the construct's narcissism, compassionate love, and religious quest orientation were .68, .78, and .86, respectively. Since the CR of narcissism is greater than .60, although the AVE is smaller than .50, convergent validity of the construct can still be assumed (Fornell & Larcker, 1981). Both the nested model comparison and the test of Fornell and Larcker (1981) show discriminant validity for the latent variables surveyed in the leader. Table 9 below summarizes the reliability and validity of the psychometric scales used in this sample.

Table 9: Study 1: Reliability and Validity of the Used Scales

Scale	Dimension(s)	Cronbach's α	CR (ω)	AVE	MSV
NIRO	Quest orientation	.88	.86	.55	.01
SCBCS	unidimensional	.84	.78	.50	.14
G-NPI-13	all dimensions		.83	.42	.14
SLS	all dimensions		.95	.59	.12

Note. Maximum shared variance (MSV) has been calculated directly from the correlation matrix of latent variables of the measurement model including error terms. Cronbach's α is not reported for higher-order multidimensional variables, instead CR (ω) is reported (Gignac, 2014; R. A. Peterson & Kim, 2013; Viladrich et al., 2017; Watkins, 2017).

Descriptive statistics and intercorrelation matrix. The intercorrelation matrix shown in table 10 shows the descriptive statistics and correlation coefficients with their 95% confidence intervals. Both control variables, hours volunteered and years in leadership role, show no significant effects on the dependent variable servant leadership. Therefore, they do not have to be included in the regression model as independent control variables in the subsequent regression analyses. Years in a leadership role shows a significant correlation only with narcissism. This could be due to the fact that narcissists are faster to emerge in leadership positions and are less effective (Externbrink & Keil, 2018; Grijalva et al., 2015) and

are therefore more exposed to the risk of management derailment (Blair, Hoffman, & Helland, 2008). Compassionate love ($r = .32$; $p < .01$) and narcissism ($r = -.15$; $p < .05$) show a significant correlation with the dependent variable servant leadership. Quest orientation to religion shows no significant correlation in the two-sided test ($r = .14$; $p = .07$).

Table 10: Study 1: Means, Standard Deviations, and Correlations with Confidence Intervals

Var.	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. HV	1.49	5.60					
2. YLR	8.52	7.15	.05 [-.10, .20]				
3. CL	4.93	1.02	.12 [-.03, .27]	.09 [-.06, .24]			
4. QO	2.18	1.01	-.02 [-.17, .14]	.09 [-.06, .24]	.09 [-.06, .24]		
5. NAR	3.00	0.59	-.04 [-.19, .11]	-.16* [-.30, -.01]	-.25** [-.38, -.10]	.05 [-.10, .20]	
6. SL	4.58	0.70	-.06 [-.21, .09]	-.01 [-.16, .14]	.32** [.18, .45]	.14 [-.01, .28]	-.15* [-.30, -.00]

Note. HV = Hours volunteered, YLR = Years in leadership role, CL = Compassionate love, QO = Quest orientation, NAR = Narcissism, SL = Servant leadership. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets show the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014). * indicates $p < .05$. ** indicates $p < .01$.

Hypotheses testing. The hypotheses are tested with (multiple) regression analyses. I present the statistics in the order in which I made the hypotheses. Therefore, I started with the relationship between narcissism and servant leadership. I present the results of the first regression analysis in table 11.

Table 11: Study 1: Regression Results of Narcissism Using Servant Leadership as the Criterion

Predictor	<i>b</i>		<i>beta</i>		Fit
	<i>b</i>	95% CI [LL, UL]	<i>beta</i>	95% CI [LL, UL]	
(Intercept)	5.11**	[4.58, 5.62]			
NAR	-.18*	[-.35, -.00]	-.15	[-.29, -.00]	
					$R^2 = .023^*$
					95% CI [.00,.09]

Note. NAR = Narcissism. A significant *b*-weight indicates the beta-weight is also significant. *b* represents unstandardized regression weights. *beta* indicates the standardized regression weights. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively. * indicates $p < .05$. ** indicates $p < .01$.

Narcissism has a significantly negative effect on servant leadership with $\beta = -.15$ ($p < .05$; 95% CI [-.29, -.00]). The proportion of explained variance in this linear model was 2.3% ($R^2 = .023$; $p < .05$; 95% CI [.00, .09]). Cohen's f^2 for this linear regression model was .024. The confidence intervals were estimated by bootstrapping ($B = 5,000$; Algina, Keselman, & Penfield, 2008). The CIs represent a plausible range for β and R^2 respectively, so that one can be 95% sure that the CI determined here includes β and R^2 respectively (Cumming & Finch, 2005). Both the unstandardized regression weight ($b = -.18$; $p < .05$; 95% CI [-.35, -.00]) and the standardized regression weight $\beta = -.15$ are in the low effect size range (Cohen, 1988). For Cohen's f^2 , a low effect size can also be determined ($f^2 = .024$). A closer look at the CIs reveals they are relatively broad, and the upper limit is very close to zero. This observation applies both to the CIs of *b* and β and to the CI of R^2 ,

where the lower limit of R^2 is close to zero. This observation indicates I should interpret these results with caution as values very close to zero cannot be excluded.

The following table 12 shows the results of the regression analysis with compassionate love as regressor and servant leadership as dependent variable.

Table 12: Study 1: Regression Results of Compassionate Love Using Servant Leadership as the Criterion

Predictor	<i>b</i>		<i>beta</i>		Fit
	<i>b</i>	95% CI [LL, UL]	<i>beta</i>	95% CI [LL, UL]	
(Intercept)	3.50**	[3.02, 4.01]			
CL	.22**	[.12, .32]	.32	[.17, .45]	
					$R^2 = .102^{**}$
					95% CI [.03,.20]

Note. CL = Compassionate love. A significant *b*-weight indicates the beta-weight is also significant. *b* represents unstandardized regression weights. *beta* indicates the standardized regression weights. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively. * indicates $p < .05$. ** indicates $p < .01$.

Compassionate love has a significantly positive effect on servant leadership with $\beta = .32$ ($p < .01$; 95% CI [.17, .45]). The proportion of explained variance in this linear model was 10.2% ($R^2 = .102$; $p < .01$; 95% CI [.03, .20]). Cohen's f^2 for this linear regression model was .114. The confidence intervals were estimated by bootstrapping ($B = 5,000$; Algina, Keselman, & Penfield, 2008). The CIs represent a plausible range for β and R^2 respectively, so that one can be 95% sure that the CI determined here includes β and R^2 respectively (Cumming & Finch, 2005). The unstandardized regression weight ($b = .22$; $p < .01$; 95% CI [.12, .32]) was small and the standardized regression weight $\beta = .32$ was medium regarding the effect size range (Cohen, 1988). However, for Cohen's f^2 , a small effect size was determined

($f^2 = .114$), whereby this is closer to the range of a medium effect size ($f^2 \geq .15$) than to the lower limit for small effect sizes ($f^2 \geq .02$; *ibid.*). Considering the confidence intervals, I can note that for b and β , the lower limits show a substantial distance to zero, indicating highly significant results. The confidence interval of R^2 also excludes zero. This contrasts with narcissism, where the upper limits for b and β (negative correlation) and the lower limit of R^2 hardly differ from zero. Thus, we can be more confident that compassionate love has robust and comprehensible results.

Table 13 below shows the results of the regression analysis with religious quest orientation as regressor and servant leadership as dependent variable.

Table 13: Study 1: Regression Results of Religious Quest Orientation Using Servant Leadership as the Criterion

Predictor	<i>b</i>		<i>beta</i>		Fit
	<i>b</i>	95% CI [LL, UL]	<i>beta</i>	95% CI [LL, UL]	
(Intercept)	4.37**	[4.10, 4.65]			
QO	.10	[-.02, .20]	.14	[-.03, .30]	
					$R^2 = .019$
					95% CI [.00,.09]

Note. QO = Quest orientation. A significant b -weight indicates the beta-weight is also significant. b represents unstandardized regression weights. $beta$ indicates the standardized regression weights. LL and UL indicate the lower and upper limits of a confidence interval, respectively. * indicates $p < .05$. ** indicates $p < .01$.

Religious quest orientation showed a non-significant (ns) positive effect on servant leadership with $\beta = .14$ ($p = .07$, ns; 95% CI [-.03, .30]). The proportion of explained variance in this linear model was 1.9% ($R^2 = .019$; $p = .07$, ns; 95% CI [.00, .09]). Cohen's f^2 for this linear regression model was .02. The confidence intervals were estimated by bootstrapping ($B = 5,000$; Algina, Keselman, & Penfield, 2008).

The CIs represent a plausible range for β and R^2 respectively, so that one can be 95% sure that the CI determined here includes β and R^2 respectively (Cumming & Finch, 2005). Both the unstandardized regression weight ($b = .10$; $p = .07$; 95% CI [- .02, .20]) and the standardized regression weight $\beta = .14$ were small regarding the effect size range (Cohen, 1988). A small effect size was likewise determined for Cohen's f^2 ($f^2 = .02$). Regarding the confidence intervals, it can be found that these include zero for b and β , so that the regression weight of 0 cannot be rejected. Even though these confidence intervals and p -values refer to a two-sided test of the hypothesis and the p -value of $p = .07$ may be halved ($p = .035$) due to the directed hypothesis (positive correlation between QO and servant leadership), I should treat the results of the present regression analysis with caution.

Table 14 below shows two linear regression models. The first model shows narcissism as a regressor, the second model shows narcissism and compassionate love as regressors (multiple regression), with servant leadership as the criterion. In addition, I compare both models regarding the difference in their model fit (ΔR^2).

Table 14: Study 1: Regression Results of Narcissism and Compassionate Love Using Servant Leadership as the Criterion

Predictor	<i>b</i>		<i>beta</i>		Fit	Diff.
	<i>b</i>	95% CI [LL, UL]	<i>beta</i>	95% CI [LL, UL]		
(Intercept)	5.11**	[4.57, 5.64]				
NAR	-.18*	[-.35, .00]	-.15	[-.30, .00]		
					$R^2 = .023^*$	
					95% CI	
					[.00, .09]	
(Intercept)	3.84**	[3.12, 4.59]				
NAR	-.09	[-.25, .07]	-.08	[-.21, .06]		
CL	.20**	[.10, .30]	.30	[.15, .43]		
					$R^2 = .108^{**}$	$\Delta R^2 = .085^{**}$
					95% CI	95% CI
					[.04, .21]	[.02, .17]

Note. NAR = Narcissism, CL = Compassionate love. A significant *b*-weight indicates the beta-weight is also significant. *b* represents unstandardized regression weights. *beta* indicates the standardized regression weights. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively. * indicates $p < .05$. ** indicates $p < .01$.

As already shown in table 11, narcissism has a significantly negative effect on servant leadership with $\beta = -.15$ ($p < .05$; 95% CI [-.29, -.00]). The proportion of explained variance in this linear model was 2.3% ($R^2 = .023$; $p < .05$; 95% CI [.00, .09]). Cohen's f^2 for this linear regression model was .024. As in the previous analyses, the confidence intervals were estimated by bootstrapping ($B = 5,000$; Algina, Keselman, & Penfield, 2008). The CIs represent a plausible range for β and R^2 re-

spectively, so that one can be 95% sure that the CI determined here includes β and R^2 respectively (Cumming & Finch, 2005). After I included compassionate love as the second regressor in the linear model, the β of narcissism decreased to $-.08$ ($p = .30$; 95% CI $[-.21, -.06]$) and no longer showed a significant contribution in the model. Compassionate love showed with $\beta = .30$ ($p < .01$; 95% CI $[.15, .43]$) a significant relationship of medium effect size (Cohen, 1988) to servant leadership. The regression model showed an overall explanation of variance of 10.8% ($R^2 = .108$; $p < .01$; 95% CI $[.04, .21]$), which corresponds to a Cohen's $f^2 = .121$. Compared to the regression model with narcissism alone, an incremental explanation of variance of 8.5% ($\Delta R^2 = .085$; $p < .01$; 95% CI $[.02, .17]$) was shown. This shows the importance of compassionate love over and above narcissism as an antecedent of servant leadership. When the results of this multiple regression analysis are compared with the results of the compassionate love model alone (table 12), it becomes clear that the difference in R^2 is $.06$ ($R^2 = .108$ for multiple regression model including narcissism and compassionate love and $R^2 = .102$ for simple regression with compassionate love as regressor). The real contribution of narcissism to the explanation of the variance in servant leadership, if compassionate love is simultaneously considered as antecedent, is thus vanishingly small. This suggests that almost all the variance explained by narcissism (2.3%) is also explained by compassionate love, while compassionate love can also explain additional variance in the target construct servant leadership.

5.1.4 Discussion

The aim of study 1 was to identify and empirically test further potential antecedents of servant leadership, besides those already known (Eva et al., 2019; Xu et al., 2020). I based the study on three psychological constructs, which were to be examined in relation to servant leadership.

First, I examined the subclinical form of narcissism regarding its predictive value for servant leadership. The conducted regression analysis could show that there is a significant negative relationship between narcissism and servant leadership ($\beta = -.15$; $p < .05$; 95% CI $[-.29, -.00]$), whereby the effect size is to be classified as small and the confidence interval gives reason to interpret the results with caution.

Second, the relationship between compassionate love and servant leadership was investigated. The construct compassionate love for non-intimate others has not yet been empirically investigated and has therefore not yet been included in any of the current nomological networks (e.g., Eva et al., 2019; Xu et al., 2020). The regression analysis showed hypothesis-conform results, with a positive correlation between compassionate love and servant leadership of medium effect size ($\beta = .32$; $p < .01$; 95% CI [.17, .45]). In comparison to regression analysis with narcissism as regressor, it is noticeable that the effect size is considerably higher, the lower limit of the confidence interval shows a clear distance to zero and the confidence interval is narrower.

Third, religious quest orientation was investigated as antecedent of servant leadership. In the tripartite construction of religiousness (extrinsic, intrinsic, and quest orientation; Batson et al., 1993), religious quest orientation appeared to be the dimension most closely associated with servant leadership. In the empirical study conducted, a $\beta = .14$ ($p = .07$, ns; 95% CI [-.03, .30]) with $R^2 = .019$ ($p = .07$, ns; 95% CI [.00, .09]) was found in the regression model. The regression weight showed a non-significant p -value and a confidence interval including zero. Both indicate that in the 95% confidence interval, it cannot be ruled out that there is an effect that is non-existent ($\beta = 0$). Although the p -value would have to be halved because, according to the hypothesis, a one-sided test would have to be performed ($p = .035$), the overall result remains at the limit of statistical significance. This leads to the conclusion that the results of this analysis should be interpreted with caution.

Fourth, hypotheses 1 and 2 were tested in a multiple linear regression model. At this point, the theoretical argument of (Brouns et al., 2020) that compassionate love is the antithesis of narcissism is taken up. In this thesis, it is argued that compassionate love is not the mere antithesis of narcissism. Rather, it is a requirement not to be a narcissist to be able to feel compassionate love for non-intimate others. The multiple regression analysis showed results that were consistent with the hypothesis: When compassionate love was added to the model in the second regression step, narcissism had a $\beta = -.08$ ($p = .30$; 95% CI [-.21, -.06]) and no longer made a significant contribution. Compassionate love, however, showed a medium effect size with $\beta = .30$ ($p < .01$; 95% CI [.15, .43]). After compassionate love was introduced into the model, R^2 increased to .108 (95% CI [.04,

.21]), which means an $\Delta R^2 = .085$ (95% CI [.02, .17]). These results indicate that narcissism and compassionate love in servant leadership have similarly explained variance components and compassionate love additionally explains unique variance beyond narcissism.

Theoretical implications. Study 1 has different theoretical implications, which are described in detail hereafter. First, the finding that narcissism was significantly negatively related to servant leadership supports previous research findings on narcissism as an antecedent of servant leadership (S. J. Peterson et al., 2012). Furthermore, it implicitly reinforces the assumption that narcissistic personalities emerge into leadership positions faster (leader emergence) but are not entirely effective leaders (Grijalva et al., 2015). This follows from the fact that servant leadership can be assumed to be a positive leadership theory, conducive to desired outcomes and therefore effective (e.g., Eva et al., 2019; Xu et al., 2020) and if narcissists tend not to show such leadership behavior due to their subclinical self-love, these persons will also lead less effectively. The empirical information obtained in this study also supports the fact that narcissism as an antecedent is justifiably found in the nomological network of servant leadership (e.g., Eva et al., 2019; Xu et al., 2020).

Furthermore, the study showed a significant positive link between compassionate love and servant leadership. This relationship also persisted in a multiple regression model that included both narcissism and compassionate love as predictors of servant leadership. The two constructs were conceptualized as antithetical, following Brouns et al. (2020). This assumption was reflected in the data, since narcissism, as a singularly significant negative predictor of servant leadership, no longer made a substantial contribution to explaining the criterion variable in the multiple regression model. This suggests that narcissism and compassionate love explain similar proportions of variance in the criterion construct, with compassionate love being found to explain incremental variance beyond narcissism. Contrary to the conceptualization of Brouns et al. (2020), compassionate love does not seem to be the mere opposite of narcissism (subclinical self-love vs. compassionate love for others), but more than that. Rather, it seems to be a prerequisite not to have a narcissistic personality to feel compassionate love at all. Thus, from a theoretical point of view it seems to make sense to include compas-

sionate love as an integral cornerstone of servant leadership (van Dierendonck & Patterson, 2015) in the nomological network of antecedents. Compassionate love explains significantly more variance in the servant leadership construct than narcissism. The research presented here supports the assumption of van Dierendonck and Patterson (2015) that compassionate love is a central antecedent and building-block of servant leadership and empirically justifies that this concept should be included in further theory building.

Wallace (2007) described the high compatibility of servant leadership with a biblical worldview, as it supports human dignity and community by focusing on compassion and the personal needs of people and by promoting a sense of justice and a critical use of power. The significant result in the one-sided hypothesis test showed a small effect size, indicating that religious quest orientation itself is not a meaningful antecedent of servant leadership. Rather, it may be the characteristics attributed to religious people. This refers to characteristics such as anti-authoritarianism, compassion and freedom from prejudice, which have also been shown in empirical studies to correlate with religious quest orientation (e.g., Leak & Finken, 2011; McCleary et al., 2011). Thus, it is possible that religious quest orientation has an indirect influence on servant leadership, which is mediated by the above-mentioned characteristics. However, regarding the direct effect shown, especially in comparison to the effect size of compassionate love, this is to be interpreted as being of minor importance. Against this background, the further theoretical elaboration of religiousness in the context of servant leadership research also appears to be less promising. In contrast to compassionate love, religious quest orientation does not seem to be an integral cornerstone of servant leadership. To be a servant leader, one does not necessarily have to be a religious or spiritual person. However, it may be beneficial to have characteristics that are particularly attributed to individuals with strong religious quest orientation. Future research should address these relationships.

Practical implications. In addition to the theoretical implications, study 1 also provides practically applicable findings, which are described in more detail below. If an organization has already integrated servant leadership as a leadership theory into its leadership practice or intends to do so in the future, the question of targeted, effective personnel recruitment also arises for these organizations. Can-

didates who are not narcissistic and who additionally show high compassionate love for non-intimate others appear to be particularly suitable for leadership roles according to the empirical evidence obtained in this study. In harmony with other previously researched antecedents (see Eva et al., 2019; Xu et al., 2020), these characteristics form the basis for the personnel assessment of prospective leaders of companies that have already cultivated servant leadership or plan to pursue it in the future. As Brouns et al. (2020) have already described, individuals with a high level of compassionate love for non-intimate others are predestined to be good servant leaders, capable of making value-driven decisions, having a positive impact on society and therefore ensuring the sustainable development of the organization. Especially since the SCBCS provides an efficient short scale (Hwang et al., 2008), it can be used as a screening method as part of the personnel selection process as it is a practically easy-to-implement instrument.

Limitations and future research. The study design (leader-follower dyads) is one of the major strengths of this study to reduce common method bias (Podsakoff et al., 2003). A limitation can also be found in this respect: To make the survey flexible and comfortable, the questionnaire was implemented bidirectionally, i.e., both employee and leader could be the first participant of each dyad to be formed. Especially if the leader was the first participant of a dyad, the leader faced the decision to recruit exactly one employee to take part in the study by forwarding a link. In this step there was the risk that the leader would prefer the employee who they assume will answer the study in their interest, i.e., most likely an employee close to the leader. This can cause a biased response behavior despite multiple rater sources. There are still limitations in the alternative scenario that the employee is the first of the dyad to participate in the study. In this setting, it is always to be expected that only employees who have a stable, high-quality LMX relationship (Graen & Uhl-Bien, 1995) with their leader will acquire the latter for a study. The implicit selection of test subjects in the sample, which may have taken place here, could also have led to bias in the results. To counter this limitation in future studies, a multi-level model would have to be used which, for example, would aggregate the results per team/group at the employee level and thus include both employees who are well-disposed towards the leader and em-

ployees who do not have such a good relationship with their leader. Thus, the bias that might result from selecting a single rater would be equalized.

Since I designed this study as a cross-sectional study, I can only derive causal inferences from its underlying theory (Taris & Kompier, 2014). In principle, cause and effect can be determined in a longitudinal design, since the variables investigated are measured at least twice during the study (*ibid.*). Thus, the data contain information about the timing of events underlying these relationships and show how the presumed outcomes have changed over time and also whether this variation is due to variations in the assumed independent variables (*ibid.*). A closer look at the independent variables under investigation reveals that these are stable personality traits. Compassionate love was conceptually described as stable (Sprecher & Fehr, 2005) and could also be shown to be a stable trait over time in empirical studies (e.g., Virat, Trouillet, & Favre, 2020). Regarding narcissism, there are comparable studies that support the theoretical conception of subclinical narcissism as a stable personality trait (e.g., del Rosario & White, 2005). For religious quest orientation, high correlations in a time lagged study could also be shown, with significant differences between measurement time 1 and 2 in the mean scores (Kamble, Lewis, & Cruise, 2010). Since a small deviation in the independent variables (stable personality traits) between measurement points of a longitudinal design is to be expected, it should at least be critically questioned whether a different research design in this study would have had advantages over the cross-sectional design.

This study could show that not every antecedent of servant leadership explains unique variance, but that there may be overlaps between two competing antecedents. In this study this observation was made for the two antecedents' narcissism and compassionate love. In future research a stronger focus could be put on this redundancy of antecedents. For example, a study could be carried out that surveys all antecedents contained in the nomological network of servant leadership (Eva et al., 2019; Xu et al., 2020) and examines their incremental variance in servant leadership. Which variables will have to be surveyed to be able to predict as accurately as possible if a potential leader will behave in a servant way? This would not only uncover possible shadowed conceptual overlaps between antecedents from a theoretical perspective but would moreover provide the most

accurate and efficient set of constructs that must be psychometrically assessed to perform a valid personnel selection.

5.2 HOW IS ENACTING IN SERVANT LEADERSHIP RELATED TO LEADERS' EMOTIONAL EXHAUSTION AND FLOURISHING? THE MEDIATING ROLE OF EXPERIENCED MEANINGFULNESS

5.2.1 Hypothesis Development

As already explained in chapters 3.2.1 and 3.2.2, compared to the relationship between leadership and mental health of those being led, there are fewer studies on the relationship between leadership and leaders' mental health (Barling & Cloutier, 2017). For a detailed presentation of the literature, please refer to the aforementioned chapters. In this study (study 2), an empirical analysis will be carried out to determine the psychological process by which servant leadership is related to the leaders' mental health. To briefly recapitulate the previous research results on health-promoting and -impairing leadership for leaders own mental health, a summary of the most important empirical findings is given below. In general, there has been an imbalance between the studies which, derived from theory, assumed positive versus negative mental health outcomes.

Specifically, literature search has revealed only two studies that could show (partially) positive effects of leadership on leaders' mental health. Firstly, a cross-sectional study showed that transformational leadership has a positive effect on mental health and functions via the process of satisfying basic psychological needs (Lanaj et al., 2016). Another study showed that there was even a short-term positive effect on recovery and work engagement and consequently well-being when the leader practiced abusive supervision (Qin et al., 2018). However, this effect turns negative in a long-term view (*ibid.*).

The studies that concluded that leadership is an emotional burden have argued based on different theories. First, there have been several studies that have argued based on the COR theory (Hobfoll, 1989). Zwingmann et al. (2016) established the starting point with a comprehensive cross-sectional and longitudinal study that examined the relationship between transformational leadership and emotional exhaustion. The cross-sectional results were in agreement with Lanaj et

al. (2016) and showed a negative correlation between transformational leadership and emotional exhaustion (Zwingmann et al., 2016). However, this observation turned into the opposite in the longitudinal analysis: transformational leadership showed a positive relationship with emotional exhaustion, i.e., a negative effect on the mental health of the leader (ibid.). In another study it was shown that ethical leadership leads to the loss of personal resources (ego-depletion), which ultimately resulted in abusive supervision (Lin et al., 2016). Furthermore, it could be shown that transformational leadership leads to emotional exhaustion and finally to turnover intentions (Lin et al., 2019). Second, the JD-R model (Demerouti et al., 2001), transactional stress theory (Lazarus & Folkman, 1984) and power theories such as social distance theory (Magee & Smith, 2013) and consent-based theories of power (Keltner et al., 2008) were used as a basis for the argumentation. In the studies that used these theories (Bernerth & Hirschfeld, 2016; Foulk et al., 2018; Wirtz et al., 2017), it was striking that there was a common understanding of the consequences of leadership on the leader as a result of an interdependent social exchange process (Cropanzano & Mitchell, 2005). Thus, different theoretical lines of argumentation emerged from the previous literature that tried to explain leadership and its effect on the mental health of the leader.

Servant leadership and leaders' mental health. In their chapter on servant leadership and well-being, Panaccio, Donia, et al. (2015) also described the role of servant leadership and leaders' well-being. After extensive literature research, this is the only contribution that is dedicated to the topic of servant leadership and leaders' mental health in a structured and dedicated manner. The ideas presented there can be linked to the present study and form a solid starting point for the theoretical deduction of the hypotheses. Therefore, the theoretical-conceptual ideas of this chapter are summarized below:

They summarized their theoretical considerations in the JD-R model by identifying resources that prevent burnout and job demands that can promote burnout. In general, they stated that it is the individual balance of job demands and resources that causes well-being and flourishing or emotional exhaustion. With this basic idea in mind, the following describes the respective resources and demands that can be found in leaders who practice servant leadership.

As the first resource, Panaccio, Donia, et al. (2015) suggested self-actualization and personal growth. They used the self-determination theory (Ryan & Deci, 2000a), which, as already described earlier, assumes three basic psychological needs: autonomy, competence, and relatedness. Servant leaders satisfy their need for autonomy by acting in accordance with their own personality and feelings, by behaving ethically and honestly towards others (Liden et al., 2008). Servant leaders solve problems and provide help for their followers, allowing servant leaders to experience the feeling of competence by achieving desired results (Liden, Wayne, et al., 2014). Lastly, servant leaders succeed in satisfying their need for relatedness by making a sincere and honest effort to understand and support other people within their organization, which they accomplish by developing lasting relationships with their direct employees (Liden et al., 2008). Through the helping, supportive nature of servant leadership, leaders who practice servant leadership can be expected to experience personal growth and mental health because they can act in congruence with their “true self” and thus experience self-actualization through the satisfaction of their basic psychological needs.

As a second resource, Panaccio, Donia, et al. (2015) argued for the reciprocity of servant leaders’ employees. They based this argumentation on both social exchange theory (Blau, 1964; Cropanzano & Mitchell, 2005) and social learning theory (Bandura, 1977b). According to the social learning theory, individuals follow the behavior of individuals and role models from their environment (Bandura, 1977b). In an organizational context, leaders often function as role models, whereby servant leaders are particularly suitable for this purpose, as their leadership behavior appears attractive, credible and desirable to employees (Liden, Panaccio, et al., 2014; Neubert et al., 2008). Consequently, employees imitate the behavior of their leader, who acts as a mentor (Lankau & Scandura, 2002), which in turn can also be beneficial to the health of the leader. Furthermore, in the sense of the social exchange theory, positive emotions can be passed on from the leader to the employees and, in the interdependent social exchange, can be returned to the leader by the employee. For instance, research has shown that individuals who show positive emotions can also trigger positive emotions in the group they are surrounded by (Isen, 1987). Leaders who behave altruistically and are eager to help, as servant leaders do, develop positive emotions about their good deeds and thus continuously feeling good (Fredrickson, 2003).

The first job demand which Panaccio, Donia, et al. (2015) presented in their chapter is the risk of a work-life conflict. What is meant by this and what is the underlying theory? This reasoning uses the role theory (R. L. Kahn et al., 1964) and assumes that inter-role conflicts may arise between private and occupational roles. Since servant leadership is demanding for the leader and consumes a high amount of time, less time is left for private roles. Conflict occurs when the time spent on fulfilling, e.g., the leadership role, is so high that other roles (e.g., family role) become difficult to fulfill (Greenhaus & Beutell, 1985). Greenhaus and Beutell (1985) divide, in addition to the time-based conflict mentioned above, into a strain-based conflict, which arises when one of the conflicting roles exposes the person to high stress, which can lead to tension and exhaustion, resulting in poorer performance in the other role, and a behavior-based conflict, which occurs whenever the behavior of one role is not compatible with the behavior of the other role. In addition to time-based conflict, servant leaders can be faced with strain-based conflict, as they push themselves beyond their self-interest and engage with the community (e.g., Greenleaf, 1977), which can cause stress and tension due to challenges of the leadership role.

The second job demand presented by Panaccio, Donia, et al. (2015) is also based on the role theory (R. L. Kahn et al., 1964). They cited the three role stressors known in literature –role conflict, role ambiguity, and role overload– as job demands of servant leaders. Role conflict can arise for servant leaders for two reasons (Panaccio, Donia, et al., 2015): First, servant leaders are regularly confronted with potentially conflicting interests of different stakeholders. This can lead to so-called inter-sender role conflict. If, for example, the organization is geared towards growth and expansion and the community is striving for sustainability at the same time, servant leaders are forced to deal with this dilemma. It is also conceivable that conflicting interest groups could form within a group, e.g., the community, which the servant leader would have to balance. Second, inter-role conflicts can occur. These arise, as in the case of work-life conflict, from two conflicting roles. As Sousa and van Dierendonck (2017) postulated, a leader also has a traditional manager role in addition to the servant (leader) role. In the case of low-performing employees, the manager role would expect disciplinary measures to be taken. At the same time, the servant (leader) role would expect that the cause can be precisely identified through a good relationship with the

employee and that, for example, emotional healing takes place if the employee does not perform well due to personal challenges. Role ambiguity occurs when the goals and expectations of a role are blurred for the role owner (R. L. Kahn et al., 1964). The basic striving of a servant leader to not only satisfy the needs of the employees, but also the community requires that the servant leader knows what these needs are. If employees do not articulate their needs, e.g., because they are afraid of crossing the supervisor-employee boundary, the servant leader may be exposed to the risk of role ambiguity. Role overload refers to situations where the demands of a role outweigh the available resources that would be necessary to meet these demands (ibid.). Since servant leaders, e.g., in comparison to LMX (Dienesch & Liden, 1986; Graen & Uhl-Bien, 1995), try to build close relationships with all employees (Liden et al., 2008) and perform additional tasks beyond their manager role, such as bringing value to the community and bringing emotional healing to employees, these increased demands on their role can be accompanied by role overload.

In a recently published study, servant leadership was viewed from a dynamic perspective (Liao et al., 2020). The results of this study are briefly presented in the following. The daily servant leadership behavior of the leader and the effects on themselves from a within-person self-regulation perspective were assessed. The results of the two experience sampling studies suggested that servant leadership can be stressful for the leader, especially if the leader was not good at perspective taking. Servant leadership and low perspective taking was associated with same-day depletion and laissez-faire leadership the next day. Conversely, it has been shown that if the leader regularly practices perspective taking, servant leadership reduces same-day depletion and laissez-faire leadership. In this constellation, servant leadership seems to have a resource-nurturing effect. These results indicate that individual differences in the leader have an influence on the effect of servant leadership on the mental health of the leader.

Summarizing the considerations of Panaccio, Donia, et al. (2015), different theories were used to describe the relationship between servant leadership and leaders' mental health. In study 2, another generic psychological process can be proposed to explain the promotion of mental health through servant leadership. In addition to the theoretical embedding of individual differences of the leader, links to the theoretical argumentations proposed by Panaccio, Donia, et al. (2015)

can be established. The theoretical framework as well as the hypotheses derived from it are explained in the following.

Servant leadership, experienced meaningfulness at work, and mental health. Based on my previous work (Brouns, 2019; Brouns & Externbrink, 2018, 2020; Brouns et al., 2020), the TPWB is introduced as a theoretical framework (Barrick et al., 2013). To recall this theory, a brief outline is given below (ibid.):

TPWB integrates different theories and models of personality, motivation and work and organizational psychology. Implicit higher-order goals are derived from the five-factor model of personality (Big Five) and the extended job characteristics model. These fundamental goals contain a primal motivational striving, e.g., a striving for communion. This striving presupposes, according to TPWB, a certain cluster of personality traits. In this example, the cluster of the Big Five dimensions would be formed by emotional stability, i.e., low neuroticism, and agreeableness. If personality traits, which then trigger purposeful goal strivings, and job characteristics are in concordance, individuals experience a psychological state of meaningfulness, which in turn triggers motivational processes.

A central assumption of TPWB is that personality traits, by following implicit higher-order goals, and job characteristics influence both the meaningfulness experienced in the workplace (Barrick et al., 2013). According to W. A. Kahn (1990, 1992), meaningfulness is experienced when the actions of the respective individual are perceived as worthwhile, useful and valuable. Further, following Pratt and Ashforth (2003), meaning is experienced when the task to be performed is seen as purposeful and significant by the individual performing the task. Hackman and Oldham (1975), who conceptualized experienced meaningfulness as one of the critical mediators between job characteristics and attitudinal and behavioral outcomes at the workplace, likewise defined experienced meaningfulness as “the degree to which the employee experiences the job as one which is generally meaningful, valuable and worthwhile” (p. 162). Besides experienced meaningfulness, experienced responsibility and the knowledge of the results were conceptualized as critical mediators (Hackman & Oldham, 1975). However, empirical research has shown that experienced meaningfulness is the strongest mediator between job characteristics and job-related outcomes (Johns, Xie, & Fang, 1992). This result could also be substantiated meta-analytically (Humphrey et al.,

2007), which led to the fact that experienced meaningfulness was chosen as the central mediator in the TPWB to explain “the dynamic interplay of traits and job characteristics affecting subsequent motivation and work outcomes” (Barrick et al., 2013, p. 138).

Meaningfulness also seems to play a role not only in motivational processes but is furthermore an important antecedent of mental health. Therefore, Barrick et al. (2013) emphasize that the centrality of the concept of meaningfulness in TPWB was driven in particular by Aristotelian ideas about achieving eudaemonic well-being (e.g., Ryan & Deci, 2001; Ryff, 1989). “Aristotle, for example, considered hedonic happiness to be a vulgar ideal, making humans slavish followers of desires. He posited, instead, that true happiness is found in the expression of virtue—that is, in doing what is worth doing” (Ryan & Deci, 2001, p. 145). Based on this Aristotelian understanding, Fromm (1978) postulated that hedonic, subjectively felt desires, such as the pursuit of monetary success, must be distinguished from deeply rooted desires that are conducive to the individual’s personal growth and promote eudaemonic well-being (Ryan & Deci, 2001). From this, Ryan and Deci (2001) reasoned that “the term eudaimonia is valuable because it refers to well-being as distinct from happiness per se. Eudaimonic theories maintain that not all desires—not all outcomes that a person might value—would yield well-being when achieved” (p. 145). Empirical research supports the assumption that experienced meaningfulness is directly linked to mental health. It has been shown that mental health showed a two-factorial structure in a wide range of indicators, the first factor representing happiness and the other representing meaningfulness (McGregor & Little, 1998). It could also be demonstrated that meaningfulness mediated the connection between personality variables, such as self-esteem, positive relations, locus of control and optimism, and subjective well-being (Compton, 2000). Furthermore, it has been found that even in stressful events, such as a military mission, benefits can be derived by the individual if the task is perceived as meaningful (Britt et al., 2001). A further study was able to show that transformational leadership promoted the meaningfulness that employees ascribe to their work and that this psychological process increased positive affective well-being (Arnold et al., 2007). Further empirical findings showed a positive association between meaningfulness and positive well-being, conceptualized as life satisfaction, happiness and positive affect (Crego et al., 2019). The same study also found

a negative relationship between meaningfulness and negative well-being, conceptualized as psychological symptoms and negative affect (Crego et al., 2019). Moreover, meaningfulness fostered work-family balance and enrichment, and at the same time reduced work-family conflict (Bragger et al., 2019). Based on a mixed-methods work by Pines (2004), Glazer, Kozusznik, Meyers, and Ganai (2014) argued that meaningfulness is a significant resource for preventing stress.

Based on the underlying idea of servant leadership, to serve the employees and to build high-quality LMX relationships with them and based also on empirical research on servant leadership antecedents, it is argued that servant leaders primarily strive for communion. It has been shown that agreeableness as one of the Big Five dimensions is an important antecedent of servant leadership (Brouns, 2019; Brouns & Externbrink, 2018; Hunter et al., 2013). The personality dimension agreeableness describes individuals who are altruistic and feel a desire to help others (Costa & McCrae, 1992). Agreeableness has also been associated with tendencies towards generosity, fairness, selflessness and friendliness (Goldberg, 1992). Study 1 has already shown that individuals with low narcissistic tendencies and a high propensity to show compassionate love toward others, tend to engage in servant leadership behaviors. Due to these personality traits it can be assumed that such people motivationally strive for communion in order to be able to interact with other people in a harmonious manner (Barrick et al., 2013). In addition, the work situation offers clues that follow the basic striving for communion, namely social support, interdependence between employee, and interpersonal interactions outside the organization (*ibid.*). All three cues can be found in the context of servant leadership: the servant leader provides social support by serving their employees; interdependence between employee and servant leader, since one cannot function without the other: the servant leader serves the employees to develop their full potential so that the employees can contribute to the success of the organization; and social interactions outside the organization result from the servant leader's commitment to the community as a whole (Greenleaf, 1977; Greenleaf & Spears, 1998, 2002; Liden et al., 2008; van Dierendonck, 2011). These situational attributes enable the servant leader to interact with others in a harmonious and respectful manner and to follow their striving for communion (Barrick et al., 2013). This means that as soon as the individual personality (high agreeableness, high emotional stability) matches the situational attributes, self-

regulatory processes are triggered which enable the person to pursue his or her striving for communion (ibid.). This striving results in experienced meaningfulness (ibid.). Therefore, it is argued that because of the prevalent personality traits and the situational cues provided by servant leadership, the practicing of servant leadership is positively associated with experienced meaningfulness, since the inherent striving for communion can be pursued. This experienced meaningfulness in turn serves as a resource, in the sense of COR theory, which enables the leader to mitigate stress and promote well-being (Glazer et al., 2014; Hobfoll, 1989; Hobfoll et al., 2018). Hence it can be assumed that experienced meaningfulness is positively associated with leaders' flourishing and negatively associated with leaders' emotional exhaustion. Based on this argumentation derived from the TPWB and COR theory, the following hypotheses are proposed:

Hypothesis 1. Servant leadership is positively associated with experienced meaningfulness, which in turn is negatively associated with leaders' emotional exhaustion. Servant leadership mitigates the leader's emotional exhaustion through the process of experienced meaningfulness at work.

Hypothesis 2. Servant leadership is positively associated with experienced meaningfulness, which in turn is positively associated with leaders' flourishing. Servant leadership promotes leaders' flourishing through the process of experienced meaningfulness at work.

5.2.2 Method

Participants, procedures, and design. There was no dedicated data collection for study 2. Study 2 was integrated as part of the data collection of study 1. In contrast to the research design of study 1, study 2 did not use leader-follower dyads, but assessed all variables to be studied from the leader. The same applies to the measurement of leadership behavior. Compared to study 1, study 2 used a self-assessment of servant leadership that was already collected during the data collection phase of study 1. This was done due to the fact that there are only moderate correlations between self- and others-assessment of leadership behavior

(Angela Lee & Carpenter, 2018). Since the focus of study 2 is on leaders' health, it appears to be more important to assess the self-perception regarding one's own leadership behavior than the behavior perceived by the employees. Since TPWB focuses on personality, motivational striving and the associated self-regulation processes (Barrick et al., 2013), it furthermore proves useful to conduct self-assessments. Like already described in study 1 (5.1.2), the survey was conducted in 2019 among part-time students at a large German university of applied sciences. I promoted the acquisition of the study participants with the help of e-mails and face-to-face lectures. The sample comprised a total of 170 participants who were seeking a bachelor's degree parallel to their profession. Since the students were in an employment relationship, it was possible to acquire their direct leaders as study participants, unless the students themselves were in a leadership role. In this way, data on 170 leaders could be obtained. The collection of the data with the tool SoSciSurvey.de was technically realized as described below: The participation was designed to be bi-directional, i.e., the students could participate regardless of their individual role in the company (leader or employee). Depending on whether the student had a leader or employee role, a corresponding link including primary key was generated at the end of the survey, which referred to the respective other questionnaire (e.g., if the student is not a leader, the link for the leader questionnaire was generated). As mentioned at the beginning, compared to study 1, the data from the employee section of the questionnaire (others-assessment of servant leadership) was not included in the statistical analysis of study 2. The leaders in the collected sample were on average 41 years old ($SD = 11$). Regarding the gender distribution, it was found that there was a slightly higher prevalence for men in the category of leaders and a higher prevalence for women in the category of employees. The descriptive statistics for age and gender can be found in table 15 (see also Brouns et al., 2020).

Table 15: Study 2: Means and Standard Deviations of Leaders' Age and Gender

Variable	<i>M</i>	<i>SD</i>
Age	40.51	10.64
Gender	1.58	0.50

Note. $n = 170$. Gender 1 = female, 2 = male.

Psychometric scales. In study 2, the following psychological constructs had to be measured for testing the proposed hypotheses: emotional exhaustion and flourishing as indicators for leaders' mental health, and experienced meaningfulness as a potential mediator and servant leadership as independent variable. The items of the scales used can be found in appendix A2. In this study I aggregated items of the scales to so-called parcels. The item parceling strategy is an effective tool in structural equation modeling to allow the construction of models with multiple latent constructs, especially when the focus of the study is, as here, to test the relationships between the constructs (Matsunaga, 2008). All scales used in this study have a unidimensional structure, so the most important prerequisite for item parceling is given (ibid.). Especially in path models that use unidimensional scales, item parceling can theoretically eliminate irrelevant noise from the data, revealing relationships that would otherwise have remained hidden by measurement and sampling error (ibid.). During parceling, the recommendation was followed that, if possible, three parcels per factor should be formed (ibid.). In this thesis, I applied the radial parceling algorithm (Cattell & Burdsal Jr., 1975), which is a combination on factorial and correlative algorithm (Matsunaga, 2008). I present the scales used for each of the constructs listed below.

Emotional exhaustion: Maslach burnout inventory (MBI). The German version of the MBI (Büssing & Perrar, 1992) was used to measure emotional exhaustion, the central dimension of burnout. The scale comprises 8 items and on a 6-point Likert scale. Example items are "I feel burned out by my work", "Working with people all day is really exhausting for me" and "I still feel tired when I get up in the morning and have the next working day ahead of me". The following parcels for emotional exhaustion were created within the item parceling: parcel 1 (item no. 1, item no. 4, item no. 5), parcel 2 (item no. 6, item no. 7), parcel 3 (item no. 2, item no. 3, item no. 8). The numbering of the items corresponds to the order of the original scale (Büssing & Perrar, 1992). After the formation of the parcels, I computed the following measures of reliability: $\alpha = .88$; CR = .90; AVE = .75.

Flourishing: Flourishing Scale. To measure flourishing, as a second continuum of mental health besides emotional exhaustion, I used the Flourishing Scale (Diener et al., 2010). Since the scale was available in English and there is at present

no translated version, a back-translation of the items was carried out following the method of Brislin (1970). The scale comprises of 8 items and was measured on a 7-point Likert scale. Example items are “I am competent and capable in the activities that are important to me”, “I lead a purposeful and meaningful life” and “I actively contribute to the happiness and well-being of others”. The following parcels were created for flourishing: parcel 1 (item no. 1, item no. 5), parcel 2 (item no. 3, item no. 4, item no. 6, item no. 8), parcel 3 (item no. 2, item no. 7). The numbering of the items corresponds to the order of the items in the original scale (Diener et al., 2010). After building the parcels, the following measures of reliability were obtained: $\alpha = .89$; CR = .90; AVE = .75.

Experienced meaningfulness at work: Work meaningfulness scale. The work meaningfulness scale was used to measure meaningfulness at work (Bunderson & Thompson, 2009). This version, developed by Bunderson and Thompson (2009) was based on the work of Spreitzer, (1995), Wrzesniewski, McCauley, Rozin, and Schwartz (1997) and Pratt and Ashforth (2003). In the absence of a translated German version of the scale, a back-translation of the items was done according to Brislin's (1970) method. The scale consists of 5 items and was measured on a 7-point Likert scale. Example items are “The work that I do makes the world a better place”, “The work that I do is important” and “The work that I do is meaningful”. During item parceling this scale deviated from the recommendation to form three parcels per latent factor, since the scale only comprises 5 items and a parcel must consist of at least two items (Matsunaga, 2008). Therefore, two parcels were created in the process of item parceling for work meaningfulness: parcel 1 (item no. 1, item no. 5), parcel 2 (item no. 2, item no. 3, item no. 4). The numbering of the items corresponds to the order of the items in the original scale (Bunderson & Thompson, 2009). Having formed the parcels, the following measures of reliability were calculated: $\alpha = .80$; CR = .81; AVE = .67.

Servant leadership: Essential servant leadership behaviors (ESLB). In contrast to the first study, a short scale was used to measure servant leadership. For reasons of testing efficiency, the scale essential servant leadership behaviors from Winston and Fields (2015) was used. In comparison to the SLS (van Dierendonck & Nuijten, 2011) the ESLB consists of only 10 items, which is beneficial for the

acceptance of the questionnaire, especially among leaders. Since the scale was available in English and there is no German translation, a back-translation of the items was carried out following the method of Brislin (1970). As described, the scale consists of 10 items and was surveyed on a 5-point Likert scale. Example items are “Sees serving as a mission of responsibility to others”, “Seeks to instill trust rather than fear or insecurity” and “Understands that serving others is most important”. During item parceling for servant leadership the following three parcels were created: parcel 1 (item no. 4, item no. 5, item no. 10), parcel 2 (item no. 1, item no. 3, item no. 6), parcel 3 (item no. 2, item no. 7, item no. 8, item no. 9). The numbering of the items corresponds to the order of the items in the original scale (Winston & Fields, 2015). After parcels were formed, the following reliability measures were achieved: $\alpha = .83$; CR = .83; AVE = .62.

5.2.3 Results

The results of the statistical analyses are presented below. Starting with the validation of the measurement model by using a CFA, followed by the descriptive statistics and intercorrelation matrix and finally the testing of the developed hypotheses by means of suitable procedures, such as structural equation modeling.

Measurement models. In the present study it is necessary to validate the full measurement model with regard to fit indices, i.e., χ^2 , CFI, TLI and RMSEA, with CFI and TLI $\geq .90$, and RMSEA $\leq .08$ (L. Hu & Bentler, 1999). Furthermore, it is mandatory to check the discriminant validity between the different variable's servant leadership, work meaningfulness, emotional exhaustion, and flourishing, all of which have been assessed by a single source. This is performed with a procedure called nested model comparison (Hutchens, 2017), i.e., two latent variables from the measurement model (e.g., emotional exhaustion and flourishing) are combined to a single latent factor and then compared with the original model. This procedure is performed for all combinatory possibilities of the latent variables. If the χ^2 difference test is significant, the χ^2 from the merged model is significantly higher than the χ^2 of the baseline model, indicating discriminant validity between the two merged latent variables.

The original model with the parceled solutions of the variables servant leadership (SL), work meaningfulness (WM), emotional exhaustion (EE), and flourishing (FLS) had the following fit indices: $\chi^2(38) = 55.07$, RMSEA = .05, CFI = .98, TLI = .97. The fit indices indicate a good model fit, as they exceed or fall below the defined cut-off criteria (L. Hu & Bentler, 1999). To test the discriminant validity, nested model comparisons were carried out, as described above. All subsequent nested model comparisons are based on this model and compare it to the nested model. The results of the tests are shown in table 16. The results indicate that discriminant validity exists between the pairwise merged latent variables due to the significant increase in χ^2 values. Since there is a significant χ^2 difference test for all merged latent variables, discriminant validity can be assumed.

Table 16: Study 2: Nested Model Comparison with χ^2 -Difference Test

Model	Estimate	CI lower	CI upper	Df	Δ Df	χ^2	$\Delta\chi^2$
SL~~FLS	.21	.05	.38	41	3	362.27	307.2***
SL~~WM	.31	.15	.48	41	3	166.59	111.52***
SL~~EE	-.16	-.33	.01	41	3	355.51	300.44***
FLS~~WM	.43	.28	.58	41	3	150.95	95.88***
FLS~~EE	-.35	-.50	-.20	41	3	319.07	264.01***
EM~~EE	-.27	-.44	-.11	41	3	177.54	122.47***

Note. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

In addition, I calculated the AVE of the latent variables. As already reported in the section on psychometric scales, the AVE of servant leadership, work meaningfulness, emotional exhaustion, and flourishing were .62, .67, .75, and .75, respectively. The maximum value from the squared correlations (maximum shared variance) of the latent variables, calculated directly from the measurement model including error terms, ranged between .10 and .19. Since all AVE are larger than the maximum shared variance, I can also assume discriminant validity between the latent variables. Both the nested model comparison and the test of Fornell and Larcker (1981) showed discriminant validity for the latent variables surveyed in

the leader. Table 17 below summarizes the reliability and validity of the psychometric scales used in this sample.

Table 17: Study 2: Reliability and Validity of the Used Scales

Scale	Dimension(s)	Cronbach's α	CR (ω)	AVE	MSV
ESLB	unidimensional	.83	.83	.62	.10
Work Meaningfulness	unidimensional	.80	.81	.67	.19
MBI	Em. Exhaustion	.88	.90	.75	.12
Flourishing Scale	unidimensional	.89	.90	.75	.19

Note. Maximum shared variance (MSV) has been calculated directly from the correlation matrix of latent variables of the measurement model including error terms. Cronbach's α is not reported for higher-order multidimensional variables, instead CR (ω) is reported (Gignac, 2014; R. A. Peterson & Kim, 2013; Viladrich et al., 2017; Watkins, 2017).

Descriptive statistics and intercorrelation matrix. The intercorrelation matrix shown in table 18 shows the descriptive statistics and correlation coefficients with their 95% confidence intervals. In the correlation analysis, the latent variables were significantly correlated with each other, consistent with the hypotheses: SL and WM ($r = .28; p < .01$) as well as WM and the presumed outcome variables EE ($r = -.23; p < .01$) and FLS ($r = .37; p < .01$). The CIs represent a plausible range for r , so that one can be 95% sure that the CI determined here includes r (Cumming & Finch, 2005). Since all three confidence intervals evidently exclude zero, I can assume that there is a non-zero effect, i.e., significantly greater zero (for SL and WM and WM and FLS) or less zero (for WM and EE).

Table 18: Study 2: Means, Standard Deviations, and Correlations with Confidence Intervals

Var.	<i>M</i>	<i>SD</i>	1	2	3
1. SL	3.71	0.47			
2. WM	4.86	1.02	.28** [.14, .41]		
3. EE	2.68	1.00	-.14 [-.29, .01]	-.23** [-.36, -.08]	
4. FLS	5.84	0.67	.20** [.05, .34]	.37** [.23, .49]	-.31** [-.44, -.17]

Note. SL = Servant leadership, WM = Work meaningfulness, EE = Emotional exhaustion, FLS = Flourishing. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014). * indicates $p < .05$. ** indicates $p < .01$.

Hypotheses testing. I tested the hypotheses using SEM, integrating both the measurement and path model into the SEM. As described above, the measurement model does not contain the individual items as manifest variables of the latent constructs, but the previously formed parcels that aggregate values of at least two items. This measure reduced the number of free parameters and allows the structural relationships between latent constructs to be determined, even with comparably small sample sizes (Davcik, 2014; Matsunaga, 2008). The following figure 25 shows the path model of the SEM of study 2, excluding the measurement model as I have already described this in the section on the psychometric scales. The unstandardized path coefficients of the bootstrapped model (Rucker, Preacher, Tormala, & Petty, 2011) are shown. The SEM showed good model fit with the following fit indices: $\chi^2(40) = 56.46$, RMSEA = .05, CFI = .98, TLI = .98. Servant leadership was positively associated with work meaningfulness ($b = .65$; p

< .01; 95% CI [.22, 1.04]). Work meaningfulness in turn showed a positive relationship to flourishing ($b = .32$; $p < .01$; 95% CI [.19, .49]) and a negative relationship to emotional exhaustion ($b = -.35$; $p < .01$; 95% CI [-.62, -.14]).

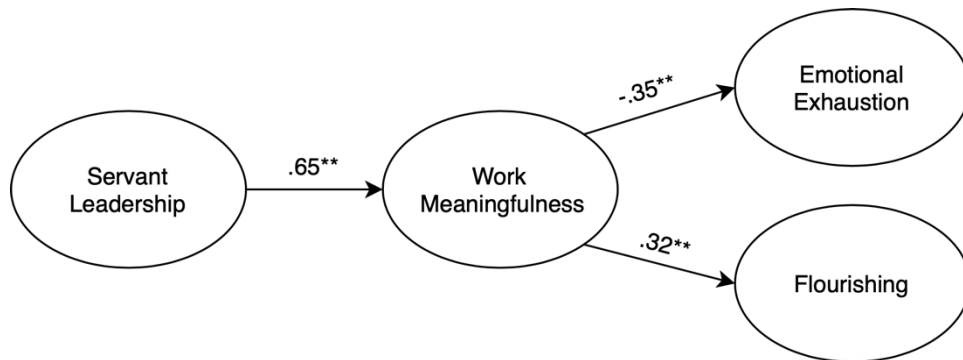


Figure 25: Study 2: Hypothesized Path Model

Note. Path coefficients indicate unstandardized weights. * indicates $p < .05$. ** indicates $p < .01$.

Although all path coefficients shown are consistent with hypotheses 1 and 2, the individual path coefficients are not a statistical test for the significance of the assumed indirect effects of servant leadership on emotional exhaustion (hypothesis 1) and servant leadership on flourishing (hypothesis 2). Therefore, the 95% confidence intervals for the indirect effects were additionally estimated by bootstrapping. To this end 10,000 bootstrapping iterations were performed using the lavaan package in R (Rosseel, 2012). The results showed that the indirect effect of servant leadership on emotional exhaustion via work meaningfulness was $b = -.19$ ($p = .08$; 95% CI [-.49, -.03]). The effect of servant leadership on flourishing via work meaningfulness was $b = .18$ ($p < .05$; 95% CI [.04, .38]). Since both confidence intervals excluded zero, I concluded that it supports both hypotheses.

To further validate the full mediation model, a partial mediation model was set up as a competing model, in which the direct paths between SL and EE and SL and FLS were modeled. The alternative SEM showed good model fit with the following fit indices: $\chi^2(38) = 55.07$, RMSEA = .05, CFI = .98, TLI = .97. All hypothe-

sized paths were found to be significant, although with slightly different path coefficients compared to the first model: SL and WM ($b = .62$; $p < .01$; 95% CI [.16, 1.02]) as well as WM and EE ($b = -.31$; $p < .01$; 95% CI [-.61, -.09]) and WM and FLS ($b = .29$; $p < .01$; 95% CI [.16, .48]). It was observed that the added paths SL \rightarrow EE ($b = -.21$; $p = .43$, ns; 95% CI [-.70, .33]) and SL \rightarrow FLS ($b = .13$; $p = .33$, ns; 95% CI [-.13, .38]) were not significant since p -values were greater than .05 and 95% CIs included zero. The results of the second alternative model are depicted in figure 26.

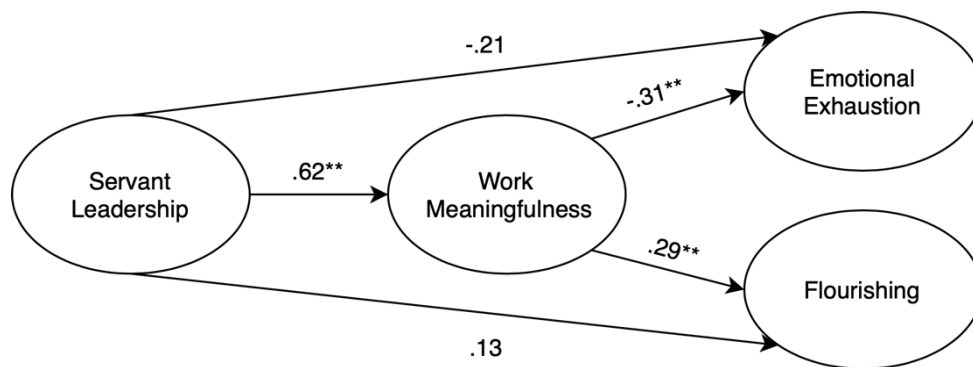


Figure 26: Study 2: Alternative Path Model

Note. Path coefficients indicate unstandardized weights. * indicates $p < .05$. ** indicates $p < .01$.

To compare the two models, a χ^2 difference test was performed between the two competing models. Table 19 shows the results of the test including χ^2 , df , χ^2/df , CFI, TLI, RMSEA, and $\Delta\chi^2$. Both models showed no significant difference in χ^2 ($\Delta\chi^2 = 1.39$, $p = .50$, ns), therefore the hypothesized, more parsimonious indirect-only mediation model (Zhao, Lynch, & Chen, 2010) is favored over the alternative model.

Table 19: Study 2: χ^2 Difference Test of Two Competing Models

Model	χ^2	df	χ^2/df	CFI	TLI	RMSEA	$\Delta\chi^2$
Alternative Model	55.07	38	1.45	.98	.97	.05	
Hypothesized Model	56.46	40	1.41	.98	.98	.05	1.39

Note. * indicates $p < .05$. ** indicates $p < .01$.

Following the decision tree of Zhao et al. (2010), an indirect-only mediation can be assumed in the present study. This is always the case if the $a \times b$ path, or in the present case the two $a \times b$ paths, are significant and the c path, or in this case the c paths, are not significant. We find this situation in the present hypothesized SEM: two significant $a \times b$ paths (SL \rightarrow WM \rightarrow EE and SL \rightarrow WM \rightarrow FLS) and two non-significant c paths (SL \rightarrow EE and SL \rightarrow FLS). In indirect-only mediation models, it is unlikely that there are other substantial mediators (Zhao et al., 2010). Formerly, the term “full mediation” (indirect-only mediation) or “partial mediation” (competitive/complementary mediation) was used (Baron & Kenny, 1986). Following the current state of consensus, however, it is difficult to prove full mediation in social sciences, as it would require that all mediators and suppressors be included in the model without measurement errors (Rucker et al., 2011). Therefore, it is recommended that the analysis of the data focuses more on the strength of the indirect effect present rather than claiming to have showed full mediation (ibid.). I would like to agree with this argumentation and conclude that work meaningfulness is a primary mediator between servant leadership and leaders’ mental health. It is unlikely that there are other mediators with a similarly high effect size as work meaningfulness (Rucker et al., 2011; Zhao et al., 2010). Work meaningfulness acted as a mediator both on emotional exhaustion as an indicator of mental illness and on flourishing as an indicator of mental health and well-being. Both serving as proxies for the two continua of leaders’ mental health. It was noticeable that the indirect effects had similarly pronounced effect sizes, obviously with different signs, i.e., opposite effects. Servant leadership reduced emotional exhaustion and increased flourishing through experienced meaningfulness at work.

5.2.4 Discussion

The aim of the second study, based on previous theoretical considerations (Brouns, 2019; Brouns & Externbrink, 2018), was to investigate the relationship between servant leadership and leaders' mental health. A focus was to be placed on the underlying psychological processes. Along with the theoretical considerations of Panaccio, Donia, et al. (2015), I proposed, based on the TPWB, a central mediator for the servant leadership-health relationship at leader level, namely experienced work meaningfulness. The present study 2 tested this mediation relationship between servant leadership and emotional exhaustion and servant leadership and flourishing.

In a cross-sectional sample of 170 leaders, I assessed four variables through psychometric scales: servant leadership, work meaningfulness, emotional exhaustion, and flourishing. Since all scales were unidimensional and the primary aim of the study was to test a path model, I applied an item parceling strategy (Matsunaga, 2008). This strategy allowed integration of the measurement and path model into the SEM and while still having a reasonable ratio of free parameters to subjects within the sample (Davcik, 2014). All scales showed very good reliability and the nested model test to check discriminant validity between the latent constructs showed a good differentiation between the investigated variables. According to the established hypotheses 1 and 2, three paths were modeled into the hypothesized model, namely $SL \rightarrow WM$, $WM \rightarrow EE$ and $WM \rightarrow FLS$. The model showed good model fit and had significant path coefficients at all modeled edges, i.e., there was a significant association between servant leadership and work meaningfulness ($b = .65$; $p < .01$; 95% CI [.22, 1.04]) and the assumed outcome variables emotional exhaustion ($b = -.35$; $p < .01$; 95% CI [-.62, -.14]) and flourishing ($b = .32$; $p < .01$; 95% CI [.19, .49]). An indirect effect of servant leadership on emotional exhaustion ($b = -.19$; $p = .08$; 95% CI [-.49, -.03]) and of servant leadership on flourishing ($b = .18$; $p < .05$; 95% CI [.04, .38]) was shown for the assumed mediation relationship. This implies that the more servant leadership behavior a leader shows, the more meaningfulness at work they experience and thus experience less stress (emotional exhaustion) and more well-being (flourishing). This means that servant leadership promotes perceived work meaningfulness when the personality and the resulting motivational strivings are congruent

to the concept of servant leadership. Hence, work meaningfulness is a resource for leaders' mental health, buffering stress and nourishing well-being.

Theoretical implications. As with the first study, the second study has different theoretical implications.

First, after reviewing the results of the SEM, it is evident that there is a strong relationship between servant leadership and work meaningfulness (Cohen, 1988). From the perspective of the TPWB, this is the case whenever individual and situational characteristics are in concert and a motivational striving can be put into action, which results in experienced work meaningfulness. In terms of servant leadership, this means that leaders can pursue their inherent striving for communion, which is prevalent among individuals with high agreeableness and emotional stability (Barrick et al., 2013). Servant leadership as a relationship-oriented leadership theory offers leaders with communion striving the opportunity to pursue their motivational striving. Servant leaders act in deep concordance with their personality, which explains the strong relationship between servant leadership and work meaningfulness.

Second, path coefficients of medium effect size show that there is a substantial relationship between work meaningfulness and health-related outcomes (Cohen, 1988). As shown in previous research (Humphrey et al., 2007; Johns et al., 1992), experienced meaningfulness at work is a central mediator between traits, job characteristics and work-related outcomes (Barrick et al., 2013). In this study, the hypothesis was put forward that besides motivational outcomes, health-related outcomes might likewise be positively mediated through the process of experienced meaningfulness at work. There is already initial empirical evidence for this assumption (Arnold et al., 2007; Britt et al., 2001; Compton, 2000; Crego et al., 2019; McGregor & Little, 1998). But it has been argued theoretically that work meaningfulness can be a potent resource to mitigate work stress (Glazer et al., 2014). Based on the COR theory, I followed this argumentation and postulated a stress-preventing and flourishing-enhancing effect of work meaningfulness (Glazer et al., 2014; Hobfoll, 1988, 1989; Pines, 2004). The empirical results support this theoretical assumption on the effect of work meaningfulness on mental health.

It can be concluded that servant leadership, with an according personality (highly agreeable and emotionally stable) and related motivational strivings (communion), fulfills the leader with experienced meaningfulness. This work meaningfulness represents, in sense of COR theory (Hobfoll, 1988, 1989; Hobfoll et al., 2018; Hobfoll & Shirom, 2000), a resource, which helps to master the high demands of a leadership role. This mastery experience has a positive influence on the expectation of self-efficacy (Bandura, 1977a) and at the same time nourishes the basic psychological need for competence (Deci & Ryan, 2008b; Ryan & Deci, 2000a). On the other hand, work meaningfulness could improve the general well-being. Both contribute positively to the overall leaders' mental health. This only functions if the job characteristics of servant leadership (Greenleaf, 1977; Greenleaf & Spears, 2002; Liden et al., 2008; van Dierendonck, 2011) are in harmony with the individual personality of the leader (Barrick et al., 2013; Brouns, 2019; Brouns & Externbrink, 2018; Hunter et al., 2013), i.e., servant leadership should not be "prescribed" in the sense that, e.g., leaders with a narcissistic personality should lead in a servant way. Therefore, this would probably cause dysfunctional behavior and impaired mental health, as there is no congruence between personality and work task, in this case servant leadership, and thus no experienced work meaningfulness. Study 1 already showed that narcissism is to be understood as antithetical to an important antecedent of servant leadership, compassionate love. A narcissist is reluctant to lead in a servant way (Brouns et al., 2020).

Practical implications. In addition to the theoretical implications mentioned above, study 2 provides practical applicable results, which are described in more detail in the following. Research has so far devoted little attention to the health of the leader and its impact on leadership behavior (Barling & Cloutier, 2017). Even non-clinical manifestations of anxiety and depression in leaders can have an impact on their leadership behavior (ibid.). The process of resource depletion plays a role in this regard (Byrne et al., 2014). It has also been shown that a leaders' well-being has an effect on the well-being of employees (Skakon et al., 2010). Stress among leaders is typically high, as they must deal with the conflicting interests of different stakeholders and must mediate conflicting interests of companies, employees and the community, the question arises for business practice, how the

resulting stress can be reduced. This study provides indications of what can help in practice to reduce emotional exhaustion and promote flourishing. Ultimately, it seems to be primarily a question of implementing the right strategy for hiring leadership staff: If an organization has already integrated servant leadership as a leadership theory into its leadership practice or intends to do so in the future, the personality and the related motivational strivings of the leader must fit the situation. If there is a good person-job fit (Caplan & Harrison, 1993; Edwards et al., 1998; Kristof-Brown et al., 2005; Van Harrison, 1978), the leader can pursue their strivings, e.g., for communion, and thus experience meaningfulness at work. This in turn makes them feel comfortable and ensures proper mental health. In addition, research results indicate that corporate culture has to be congruent with the desired leadership theory (Brouns, 2019; Brouns & Externbrink, 2018): This means that servant leaders can unfold better in an ethically shaped organizational climate.

Even though management development plays an important role for OHP and there is empirical evidence that the training of leaders has a positive effect on the health of employees (Kelloway & Barling, 2010), the results of this study give some reason for caution. No servant leader can be “made” from an individual whose personality and motivation are not congruent with the core of servant leadership. In this case the training would possibly lead to this person showing servant leadership behavior and being able to promote the health of the employees but showing this behavior would most likely be an emotional burden for the person concerned. Thus, the engagement in servant leadership behavior would not be associated with an increase in personal resources, through experienced meaningfulness at work, but would rather deprive the person’s resources (Hobfoll, 1989). Hence, it seems that servant leadership is a puzzle which consists of several pieces: First, the company must have a supportive, ethical and moral culture that is in line with the values of servant leadership (Brouns, 2019; Brouns & Externbrink, 2018). Second, the leader should be willing to lead in this way (personality and motivation). And third, complementary leadership development measures can help leaders with a “fitting” personality and motivation, and in a supportive corporate environment, to keep themselves and their employees healthy.

Limitations and future research. Just as in study 1, the research design was planned as a cross-sectional study. Since the same sample was used, the same limitations apply as in the first study. Causal conclusions can only be derived from the underlying theory (Taris & Kompier, 2014). In principle, cause and effect can be determined in a longitudinal design, since the variables investigated are measured at least twice during the course of the study (ibid.). The data thus contain information about the temporal course of the events underlying these relationships and show how the assumed outcomes have changed over time and also whether this variation is due to variations in the assumed independent variables (ibid.). In contrast to study 1, where the limitation of the cross-sectional design was mitigated by the stable nature of the personality traits, the constructs obtained here were volatile psychological phenomena such as leadership behavior, emotional exhaustion, and well-being. For example, the results could likewise imply that leaders show servant leadership behavior when they experience meaningfulness at work and are not stressed. This possibility of reverse causality between the researched constructs is the major limitation of this study. The specification of suitable measurement intervals is a question in itself, although in leadership research it is recommended that the measurement intervals should not be too long in longitudinal studies (van Dierendonck et al., 2004). A so-called shortitudinal design with a few days to weeks interval between the measurement points (Dormann & Griffin, 2015) could have further increased the quality of this study by drawing causal conclusions from the data directly and not only from theory. Diary studies could have been another possibility to design the research. This method was first introduced by Csikszentmihalyi, Larson, and Prescott (1977) and was further developed and validated (Csikszentmihalyi & Larson, 2014; Larson & Csikszentmihalyi, 2014). This method is also known as experience sampling and uses queried reports from one to several times a day, on experiences of individual persons on a specific issue (Iida, Shrout, Laurenceau, & Bolger, 2012). Examples of studies at the intersection of leadership and OHP that have used this method are Rivkin et al. (2014) and Rivkin, Diestel, and Schmidt (2016). There has already been a diary study that found that servant leadership behavior can be associated with ego depletion if the leader does not demonstrate a strong ability to perspective taking (Liao et al., 2020). Similarly, it could be examined whether personality and motivational strivings have a moderating effect on possible downstream ef-

fects of servant leadership on health. This would be a further empirical fortress of the TPWB, as it would show that the nature of a person is an important prerequisite for which work tasks are perceived as meaningful.

Although a primary mediator could be found in terms of work meaningfulness, since the models indicate indirect-only mediation (Zhao et al., 2010), further potential mediators should be subject of future research. Furthermore, more detailed SEMs could be specified, which, for example, model the psychological process from the antecedents (e.g., personality traits), motivational striving (e.g., communion-striving), leadership behavior (here servant leadership), perceived work meaningfulness to proxies of mental health. In the present study, based on the TPWB, some assumptions were made, which could also be empirically surveyed with a more sophisticated model. Furthermore, alternative theoretical approaches could be tested. From a theoretical and empirical perspective, there is reason to consider that the basic psychological needs, autonomy, competence, relatedness and beneficence are central mediators for experiencing meaningfulness at work (Martela & Riekkari, 2018). Thus, a path model of future research could assume that servant leadership fulfills the three psychological basic needs as well as beneficence, i.e., a feeling that the leader can make a positive contribution (Martela & Riekkari, 2018; Martela, Ryan, & Steger, 2018), and thus work meaningfulness is experienced by the leader, which in turn contributes positively to mental health.

In summary, the present study 2 has yielded promising results. However, it is recommended to replicate these results in future research projects. For this purpose, a larger sample should be examined in a longitudinal study to derive cause and effect from the data (Reinders, 2006; Taris & Kompier, 2014). An experience sampling (Iida et al., 2012; Larson & Csikszentmihalyi, 2014) or a shortitudinal design (Dormann & Griffin, 2015) could also be considered, since on the one hand leadership behavior is a dynamic phenomenon (Liao et al., 2020) and on the other hand it could already be shown that shorter time lags were appropriate when investigating the effect of leadership on employee health (van Dierendonck et al., 2004).

5.3 HOW SERVANT LEADERSHIP RELATES TO FOLLOWERS' EMOTIONAL EXHAUSTION AND FLOURISHING? THE ROLE OF SELF-DETERMINATION AND BASIC NEED SATISFACTION

5.3.1 Hypothesis Development

The third study addresses the effects of servant leadership on employees compared to the previous two studies, which focused on leaders directly. In contrast to the effects of servant leadership on leaders' mental health, on which no research results were available so far, this research subject has been at least partially covered by previous research. For example, job satisfaction, as a facet of subjective well-being (Barbuto & Wheeler, 2006; Mayer et al., 2008), work stress (Jaramillo et al., 2009) and other short and long-term stress indicators (Rivkin et al., 2014) were investigated in association with servant leadership. Recently, a study on the relationship between servant leadership and flourishing was published, which suggests that servant leadership has a positive contribution to employee flourishing (Giolito et al., 2020). As already described in the presentation of the overarching research model, this study goes one step beyond. As in study 2, emotional exhaustion and flourishing are conceptualized as indicators of employees' mental health in the sense of the two continua mental health model. In addition, as in study 2, the underlying psychological process is examined, which mediates the relationship between servant leadership and employees' mental health (emotional exhaustion and flourishing).

The underlying theoretical framework of this study is the SDT, which is a meta-theory describing the basic psychological needs for autonomy, competence and relatedness (e.g., Deci & Ryan, 2000, 2008b; Ryan & Deci, 2000a). First studies on the positive contribution of servant leadership to the satisfaction of basic psychological needs of employees have already been conducted (Chiniara & Bentein, 2016; Mayer et al., 2008; van Dierendonck et al., 2014). The servant leader's distinctive dedication to the personal interests of employees nourishes employees' basic psychological needs (Chiniara & Bentein, 2016). It was further shown that the connection between servant leadership and task fulfillment was mediated by the satisfied need for competence (*ibid.*). The fulfilled needs for autonomy and relatedness mediated the relationship between servant leadership and OCB

(*ibid.*). I expect that the satisfaction of basic psychological needs is not merely a mediating process for the examples given, but rather a generic pathway between servant leadership and positive motivational and health outcomes.

Servant leadership in its supportive and developmental nature is apt to foster autonomy, relatedness, and competence in employees. The empowerment dimension of servant leadership, for example, transfers important responsibilities to employees, and employees are encouraged to perform tasks and develop solutions independently so that they experience autonomy in their work (Chiniara & Bentein, 2016; Liden, Panaccio, et al., 2014; van Dierendonck & Nuijten, 2011). The need for competence is satisfied e.g., through humility, standing back and the empowerment dimension of the servant leader. These dimensions of van Dierendonck and Nuijten's (2011) servant leadership model have certain similarities with the dimension "helping subordinates to grow and succeed" of Liden et al. (2008). These dimensions comprise that servant leaders are seriously concerned about the career goals of employees and know their abilities and potential (Chiniara & Bentein, 2016). Therefore, servant leaders can help and support the development of employees' full potential, which in turn leads to the satisfaction of the psychological need for competence. A positive relationship between servant leadership and perceived efficacy at group level has already been demonstrated (J. Hu & Liden, 2011). Servant leaders also fulfill the need for relatedness with others by acting affiliative and building strong and robust dyadic relationships with their followers, as evidenced by high LMX scores (Chiniara & Bentein, 2016; Liden et al., 2008; Zou et al., 2015). This illustrates which dimensions of servant leadership nourish which basic psychological needs of employees. In summary, it can be stated that servant leadership as a whole can have a positive influence on the basic psychological needs of employees (Chiniara & Bentein, 2016; Liden, Panaccio, et al., 2014; Mayer et al., 2008; Panaccio, Donia, et al., 2015).

SDT as a meta-theory as well as the basic psychological needs as a fundamental component of this theory is particularly suitable in explaining psychological processes in OHP, since the satisfaction of basic psychological needs is associated with eudaemonic well-being (Deci et al., 2001; Ryan et al., 2013; Ryan & Deci, 2001; van den Broeck et al., 2008). It has been shown that the satisfaction of basic psychological needs is associated with well-being and thwarting of basic psychological needs is associated with impaired well-being (ill-being; Ryan & Deci,

2000a). Thus, satisfaction of basic psychological needs is associated with flourishing and reduced emotional exhaustion. Since servant leadership has the potential to satisfy the basic psychological needs of employees (Chiniara & Bentein, 2016; Liden, Panaccio, et al., 2014; Mayer et al., 2008; Panaccio, Donia, et al., 2015), which in turn leads to increased mental health of employees (Deci et al., 2001; Ryan et al., 2013; Ryan & Deci, 2001), the following hypotheses have been derived:

Hypothesis 1. Servant leadership is positively associated with employees' basic need satisfaction, which in turn has a negative association with employees' emotional exhaustion. Servant leadership reduces the emotional exhaustion of the employee through processes of autonomous motivation and need satisfaction.

Hypothesis 2. Servant leadership is positively associated with employees' basic need satisfaction, which in turn has a positive correlation with employees' flourishing. Servant leadership promotes employee flourishing through processes of autonomous motivation and need satisfaction.

5.3.2 Method

Participants, procedures, and design. I planned the data collection for study 3 as a longitudinal study using a so-called shortitudinal design (Dormann & Griffin, 2015). Regarding the leadership-employee health context, van Dierendonck et al. (2004) have already noted that the influence of leaders on employees' mental health takes place in a short-term rather than a long-term period. In addition, Fischer, Dietz, and Antonakis (2017) have established some guidelines for modeling time in leadership research: First, they distinguished between same-level and cross-level effects. In both cases, the higher the hierarchy level of the objects of analysis, the higher the unfolding time of the assumed effects. In general, it can be assumed that individual-level effects between team leader and employee occur directly and unfiltered and thus unfold swiftly, since both interact directly, usually work in one place and communicate frequently. Second, Fischer et al. (2017) distinguished effects through developmental and leverage processes, whereby the former take longer to unfold and last longer, e.g., training

measures, than the latter, e.g., motivation and emotion. With leverage processes, Fischer et al. (2017) also make a distinction between behavioral and cognitive/emotional effects. Behavioral effects usually need more time to unfold and last longer than cognitive/emotional effects. When choosing the time lags between the measurement points, I took levels of analysis and the leadership process into account.

For the present study this means that source and target of the effects are proximal. Because of the proximity, the time to unfold the effect is relatively short. Basic psychological needs and mental health indicators are considered leverage processes that also require less time to unfold. Taken together, I assumed that 5 days between the measurement points is appropriate for this study in order to capture the effects as accurately as possible, taking into account the duration of unfolding and the persistence of the constructs of the hypothesized model (Dormann & Griffin, 2015; Fischer et al., 2017). Independent and dependent variables as well as the potential mediator were collected at different points in time. This also makes the study less susceptible to common method bias due to the temporal separation in the collection of the different constructs (Podsakoff et al., 2003).

The employee reported all variables. Having an employee assess servant leadership seemed to make sense, since one study showed that the statistical correlations between the assessment of leadership behavior by the leader himself and others (e.g., employees) are only moderate (Angela Lee & Carpenter, 2018). Although this same study has shown that the assumption of self-reinforcement by the leader is not tenable, I am convinced that leadership research is primarily concerned with how leadership is perceived by the individual being led (employees; *ibid.*). Consequently, an others-assessment of leadership behavior seemed reasonable. In addition, it seemed appropriate to collect the mediator and dependent variables as self-reports, since both the basic psychological needs as well as emotional exhaustion and flourishing are very sensitive private constructs that can best be assessed by the person themselves (D. Chan, 2009; Conway & Lance, 2010).

The survey was conducted in 2019 among extra occupational students at a large German university of applied sciences. I recruited the study participants by e-mails and face-to-face lectures. The sample included a total of 106 participants who are aiming for an extra occupational bachelor's degree. Since the students

were in an employment relationship, it was possible to assess leadership behavior. The data were not nested. The collection of the data with the tool SoSciSurvey.de was technically implemented as follows: The participation was carried out via three questionnaires, which could be completed with an interval of 5 days. The data sets of the three different questionnaires were linked to each other via a primary key. Only when all three questionnaires were answered within a correct time lag was the participant counted as a valid data set in the sample. The research design, compared to the cross-sectional design, placed high demands on the conscientiousness of the study participants. This may explain the smaller number of valid participants ($n = 106$) compared to the sample of study 1 and 2. The study participants were 27 years old on average ($SD = 6$). Regarding the gender distribution it was found that 27.4% were men ($n = 29$), 71.7% women ($n = 76$) and 0.9% were diverse ($n = 1$). Descriptive statistics for age in total and in gender categories can be found in table 20.

Table 20: Study 3: Means and Standard Deviations of Age

Variable	<i>M</i> (Ov.)	<i>SD</i> (Ov.)	<i>M</i> (Ma.)	<i>SD</i> (Ma.)	<i>M</i> (Fem.)	<i>SD</i> (Fem.)
Age	27.24	5.68	28.83	6.84	26.36	4.49

Note. $n = 106$. Ov. = Overall, Ma. = Male, Fem. = Female.

Psychometric scales. In study 3, the following psychological constructs had to be measured to test the hypotheses presented: Servant leadership as dependent variable, basic need satisfaction as mediator variable, emotional exhaustion and flourishing as dependent variables. The items of the scales used can be found in appendix A3. The scales used for each of these constructs are outlined below, along with reliability measures.

Servant leadership: Servant Leadership Survey (SLS). As already described in chapter 2.3.2, I decided to use the SLS (van Dierendonck & Nuijten, 2011) in the version validated in German (Verdorfer & Peus, 2014). The whole questionnaire consisted of 30 items and was divided into 8 dimensions: empowerment, standing back, accountability, forgiveness, courage, authenticity, humility, and steward-

ship (van Dierendonck & Nuijten, 2011; Verdorfer & Peus, 2014). Example items of the scale are “My manager helps me to further develop myself”, “My manager is not chasing recognition or rewards for the things he/she does for others”, “If people express criticism, my manager tries to learn from it” or “My manager shows his/her true feelings to his/her staff”. After checking the modification indices, item 19 (“My manager is open about his/her limitations and weaknesses”) was removed from the measurement model because it had cross-loadings to other dimensions. For the higher-order construct servant leadership, consisting of the 8 dimensions mentioned, a CR = .96 and an AVE = .63 could be determined. Cronbach’s alpha is not reported for multidimensional constructs at the level of the higher-order construct, instead CR (ω) is reported (Gignac, 2014; R. A. Peterson & Kim, 2013; Viladrich et al., 2017; Watkins, 2017). At the dimensional level, reliability in the present sample was as follows: empowerment (α = .90; CR = .88; AVE = .60), standing back (α = .80; CR = .82; AVE = .61), accountability (α = .75; CR = .76; AVE = .52), forgiveness (α = .89; CR = .89; AVE = .74), courage (α = .85; CR = .85; AVE = .73), authenticity (α = .85; CR = .85; AVE = .58), humility (α = .94; CR = .93; AVE = .76), and stewardship (α = .76; CR = .75; AVE = .50). All alpha values were comparable or better than in the validation study by Verdorfer and Peus (2014), which is an indication that the scale worked properly.

Basic psychological needs: Work-related basic need satisfaction scale. The work-related basic need satisfaction scale (W-BNS) by van den Broeck et al. (2010) was used to measure the satisfaction of basic psychological needs in the work context. Since there was no validated version of the scale in German, a translation from English into German following the back-translation method was carried out (Brislin, 1970). The entire questionnaire consisted of 16 items and was divided into 3 dimensions, following the three basic psychological needs (Deci & Ryan, 2000): Need for autonomy, need for competence, need for relatedness (van den Broeck et al., 2010). Example items of the scale are: “I feel like I can be myself at my job” (need for autonomy), “I feel competent at my job” (need for competence), “At work, I feel part of a group” (need for relatedness; van den Broeck et al., 2010). For the higher-order construct basic need satisfaction, consisting of the 3 dimensions mentioned above, a CR = .89 and an AVE = .48 could be determined. Although it is a rule of thumb that the AVE should be greater than .50 (Hair et al.,

2014), an AVE greater than .40 can be accepted if CR is greater than .60 (Fornell & Larcker, 1981; Huang et al., 2013; Lam, 2012). Cronbach's alpha is not reported for multidimensional constructs at the level of the higher-order construct, instead CR (ω) is reported (Gignac, 2014; R. A. Peterson & Kim, 2013; Viladrich et al., 2017; Watkins, 2017). On the dimensional level, the reliability in the present sample was as follows: Need for autonomy ($\alpha = .85$; CR = .86; AVE = .51), need for competence ($\alpha = .83$; CR = .82; AVE = .54) and need for relatedness ($\alpha = .83$; CR = .83; AVE = .45). All alpha values were comparable or better than in the validation study (van den Broeck et al., 2010), indicating that the scale was working properly.

Emotional exhaustion: Maslach burnout inventory (MBI). The German version of the MBI (Büssing & Ferrar, 1992) was used to measure emotional exhaustion, the central dimension of burnout. The scale consists of 8 items and was measured on a 6-point Likert scale. Example items are "I feel burned out by my work", "Working with people all day is really exhausting for me" and "I feel tired again when I get up in the morning and have the next working day ahead of me". The following measures of reliability were computed: $\alpha = .91$; CR = .89; AVE = .56.

Flourishing: Flourishing Scale. To measure flourishing, as a second continuum of mental health besides emotional exhaustion, the Flourishing Scale was used (Diener et al., 2010). Since the scale was available in English and there is at present no translated version, a back-translation of the items was carried out following the method of Brislin (1970). The scale consists of 8 items and was measured on a 7-point Likert scale. Example items are "I am competent and capable in the activities that are important to me", "I lead a purposeful and meaningful life" and "I actively contribute to the happiness and well-being of others". Item no. 3 ("I am engaged and interested in my daily activities") has been removed due to poor factor loading (.48) which improved overall reliability of the scale. The following measures of reliability were obtained: $\alpha = .83$; CR = .85; AVE = .42. An AVE smaller than .50 can also be accepted here, since the CR is larger than .60, and thus a sufficient convergent validity can still be assumed for an AVE larger than .40 (Fornell & Larcker, 1981; Huang et al., 2013; Lam, 2012).

5.3.3 Results

The results of the statistical analyses are presented below. Starting with the validation of the measurement model by using a CFA, followed by the descriptive statistics and intercorrelation matrix and finally the testing of the developed hypotheses by means of suitable procedures, such as multiple regression analysis.

Measurement models. On one hand, in the present study, the validation of the complete measurement model with respect to fit indices is required, i.e., χ^2 , CFI, TLI and RMSEA, where CFI and TLI $\geq .90$ and RMSEA $\leq .08$ (L. Hu & Bentler, 1999). On the other hand, it is mandatory to check the discriminant validity between the different variable's servant leadership (independent variable), basic need satisfaction (mediator variable), and emotional exhaustion and flourishing (dependent variable), all of which have been evaluated by a single source. For this purpose, the procedure called nested model comparison (Hutchens, 2017) was used, i.e., two latent variables from the measurement model (e.g., basic need satisfaction and flourishing) were combined to a single latent factor and then compared with the original model. This procedure was performed for all combinatory options of the latent variables. In case the χ^2 difference test is significant, the χ^2 from the merged model is significantly higher than the χ^2 of the baseline model, indicating discriminant validity between the two merged latent variables.

The original model with the variables servant leadership (SL), basic need satisfaction (BNS), emotional exhaustion (EE) and flourishing (FLS) had the following fit indices: $\chi^2(1629) = 2399.12$, RMSEA = .07, CFI = .81, TLI = .80. Both CFI and TLI fall below the cut-off criteria for a good model fit (L. Hu & Bentler, 1999). This may be due to the sample size, which is very small compared to the free model parameters (141; cf. Davcik, 2014). This can be explained by the complexity of the measurement model, since both the SLS (van Dierendonck & Nuijten, 2011) and the W-BNS (van den Broeck et al., 2010) are multidimensional scales with 30 and 16 items. It could be shown that CFI and TLI are more sensitive to the sample size compared to RMSEA, which achieved the cut-off criteria (Sivo, Fan, Witte, & Willse, 2006). Regarding the RMSEA, the authors concluded that this index "may do the best job in aiding an applied researcher in distinguishing correct and incorrect (misspecified) models" (Sivo et al., 2006, p. 286). If the respective scales (SLS,

W-BNS, MBI-EE, FLS) are modeled separately in CFAs, all fit indices of each model are achieved. This gives me confidence that there is no fundamental misspecification, but that the sample size and the related statistical power are the reason for the undercutting of the fit indices. Nevertheless, I would like to take the shortfall of CFI and TLI as an indication that in the following, an analysis using structural equation models is not appropriate because the sample size is too small. Therefore, the following statistical analyses are performed using linear regression models (Hayes, 2013). In this method, all items are first combined to form a composite scale. However, the test for discriminant validity was still performed with the measurement model, which contained all items and dimensions in the model specification. This procedure corresponds to that used in study 1. To test the discriminant validity, nested model comparisons were carried out as described above. All subsequent nested model comparisons are based on this model and compare it to the nested model. The results of the tests are shown in table 21. The results indicate that discriminant validity exists between the pairwise merged latent variables due to the significant increase in χ^2 values. Since there is a significant χ^2 difference test for all merged latent variables, discriminant validity can be assumed.

Table 21: Study 3: Nested Model Comparison with χ^2 -Difference Test

Model	Estimate	CI lower	CI upper	Df	Δ Df	χ^2	$\Delta\chi^2$
SLS~~EE	-.25	-.45	-.06	1632	3	2679.45	280.33***
SLS~~FLS	.23	.02	.43	1632	3	2602.06	202.94***
SLS~~BNS	.52	.30	.73	1632	3	2447.59	48.47***
EE~~FLS	-.29	-.49	-.09	1632	3	2596.83	197.71***
EE~~BNS	-.70	-.87	-.52	1632	3	2426.92	27.80***
FLS~~BNS	.54	.33	.75	1632	3	2432.74	33.62***

Note. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

In addition, I calculated the AVE of the latent variables. As already reported in the section on psychometric scales, the AVE of servant leadership, basic need satisfaction, emotional exhaustion, and flourishing were .63, .48, .56, and .42, re-

spectively. The maximum value from the squared correlations (maximum shared variance) of the latent variables, calculated directly from the measurement model including error terms, ranged between .27 and .48. Since the maximum shared variance does not exceed the AVE for any of the constructs, I can assume discriminant validity between the latent variables. Both the nested model comparison and the test of Fornell and Larcker (1981) showed discriminant validity for the latent variables surveyed. Table 22 below summarizes the reliability and validity of the psychometric scales used in this sample.

Table 22: Study 3: Reliability and Validity of the Used Scales

Scale	Dimension(s)	Cronbach's α	CR (ω)	AVE	MSV
SLS	all dimensions		.96	.63	.27
W-BNS	all dimensions		.89	.48	.48
MBI	Em. Exhaustion	.91	.89	.56	.48
FLS	unidimensional	.83	.85	.42	.29

Note. Maximum shared variance (MSV) has been calculated directly from the correlation matrix of latent variables of the measurement model including error terms. Cronbach's α is not reported for higher-order multidimensional variables, instead CR (ω) is reported (Gignac, 2014; R. A. Peterson & Kim, 2013; Viladrich et al., 2017; Watkins, 2017).

Descriptive statistics and intercorrelation matrix. The intercorrelation matrix shown in table 23 shows the descriptive statistics and correlation coefficients with their 95% confidence intervals. In the correlation analysis, the latent variables were significantly and hypothesis-conforming correlated: SL and BNS ($r = .31$; $p < .01$) as well as BNS and the assumed outcome variables EE ($r = -.56$; $p < .01$) and FLS ($r = .48$; $p < .01$). The CIs represent a plausible range for r , so that one can be 95% sure that the CI determined here includes r (Cumming & Finch, 2005). Since all three confidence intervals have been found to exclude zero, it can be assumed that there is a non-zero effect, i.e., significantly greater than zero (for SL and BNS as well as BNS and FLS) or less than zero (for BNS and EE). A significant correlation was observed between SL and FLS ($r = .26$; $p < .01$) and between EE and FLS

($r = -.29$; $p < .01$). No significant correlation was evident between SL and EE ($r = -.18$; $p = .07$, ns.).

Table 23: Study 3: Means, Standard Deviations, and Correlations with Confidence Intervals

Var.	<i>M</i>	<i>SD</i>	1	2	3
1. SLS	3.87	0.74			
2. BNS	3.70	0.49	.31** [.12, .47]		
3. EE	2.91	1.07	-.18 [-.35, .02]	-.56** [-.68, -.41]	
4. FLS	5.81	0.51	.26** [.07, .43]	.48** [.31, .61]	-.29** [-.46, -.11]

Note. SL = Servant leadership, BNS = Basic need satisfaction, EE = Emotional exhaustion, FLS = Flourishing. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014). * indicates $p < .05$. ** indicates $p < .01$.

Hypotheses testing. I tested the hypotheses using multiple linear regressions analysis. As suggested with smaller samples, a non-parametric bootstrapping analysis was used to test the mediation model of basic need satisfaction as a mediator between servant leadership and employees' mental health (Preacher & Hayes, 2004; Preacher, Rucker, & Hayes, 2007). In this method, mediation is significant if the 95% confidence interval of the indirect effect excludes zero (Preacher & Hayes, 2004; Preacher et al., 2007). I will present the results for the outcome variable emotional exhaustion. The results based on 10,000 bootstrapped samples showed that the total effect ($b = -.26$, $SE = .14$, $p = .07$, ns) and the direct

effect ($b = -.01$, $SE = .12$, $p = .96$, ns) of servant leadership on emotional exhaustion were not significant. The indirect effect of servant leadership on emotional exhaustion mediated by basic need satisfaction was $-.25$ with 95% CI $[-.44, -.07]$. Servant leadership satisfied basic psychological needs, which led to reduced emotional exhaustion. Due to the significant indirect and the non-significant direct effect, indirect-only mediation can be assumed, omitted mediators being unlikely (Zhao et al., 2010). I will show the detailed results of the mediation analysis for outcome variable emotional exhaustion in table 24.

Table 24: Study 3: Mediation Effects of Basic Need Satisfaction on the Relationship between Servant Leadership and Emotional Exhaustion

Regression paths	<i>b</i>	<i>t</i>	<i>p</i>
SL → BNS (<i>a</i> path)	.20	3.30	< .01
BNS → EE (<i>b</i> path)	-1.22	-6.52	< .001
SL → EE (<i>c</i> path, total effect, excl. mediator)	-.26	-1.83	.07
SL → EE (<i>c'</i> , direct effect, incl. mediator)	-.01	-1.80	.96
Indirect effect (<i>a</i> × <i>b</i>) with 95% CI	-.25 [-.44, -.07]		

Note. $n = 106$. SL = Servant leadership, BNS = Basic need satisfaction, EE = Emotional exhaustion. b = unstandardized coefficient. Model fit $R^2 = .31$, $F(2, 103) = 23.4$, $p < .001$.

The following figure 27 shows the modeled path diagram along with the path coefficients.

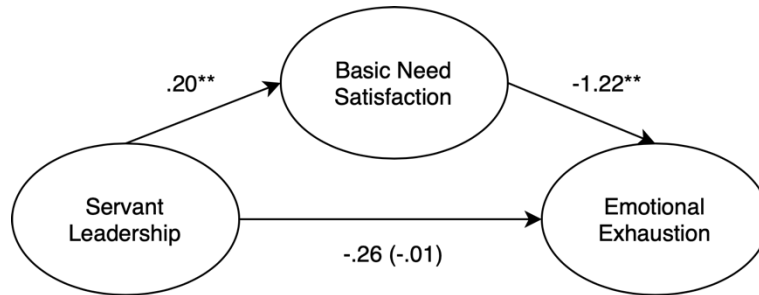


Figure 27: Study 3: Path Model for Servant Leadership on Emotional Exhaustion via Basic Need Satisfaction

Note. Path coefficients indicate unstandardized regression weights. The direct effect (c') is shown in parentheses. * indicates $p < .05$. ** indicates $p < .01$.

Following this, the results for outcome variable flourishing will be presented. The results based on 10,000 bootstrapped samples showed that the total effect ($b = .18$, $SE = .07$, $p < .01$) of servant leadership on flourishing was significant. The direct effect of the above relationship was not ($b = .09$, $SE = .06$, $p = .17$, ns). The indirect effect of servant leadership on flourishing, mediated by basic need satisfaction, was .09 with 95% CI [.02, .18]. Servant leadership satisfied employees' basic psychological needs, which led to increased employee flourishing. Due to the significant indirect and the non-significant direct effect, indirect-only mediation can likewise be assumed, i.e., omitted mediators are unlikely (Zhao et al., 2010). I will show the detailed results of the mediation analysis for outcome variable emotional exhaustion in table 25 below.

Table 25: Study 3: Mediation Effects of Basic Need Satisfaction on the Relationship between Servant Leadership and Flourishing

Regression paths	<i>b</i>	<i>t</i>	<i>p</i>
SL → BNS (<i>a</i> path)	.20	3.30	< .01
BNS → FLS (<i>b</i> path)	.46	4.89	< .001
SL → FLS (<i>c</i> path, total effect, excl. mediator)	.18	2.74	< .01
SL → FLS (<i>c'</i> , direct effect, incl. mediator)	.09	1.36	.17
Indirect effect (<i>a</i> × <i>b</i>) with 95% CI	.09 [.02, .18]		

Note. $n = 106$. SL = Servant leadership, BNS = Basic need satisfaction, FLS = Flourishing. b = unstandardized coefficient. Model fit $R^2 = .24$, $F(2, 103) = 16.34$, $p < .001$.

The following figure 28 shows the modeled path diagram along with the path coefficients.

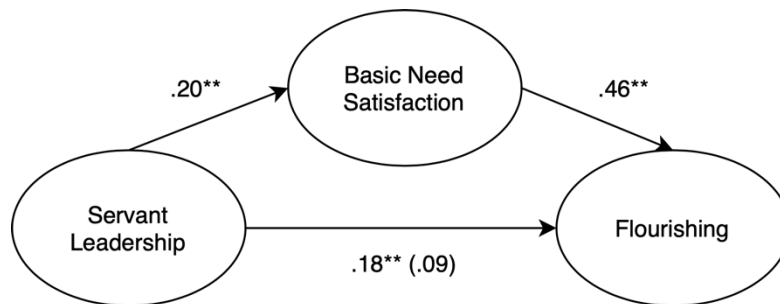


Figure 28: Study 3: Path Model for Servant Leadership on Flourishing via Basic Need Satisfaction

Note. Path coefficients indicate unstandardized regression weights. The direct effect (c') is shown in parentheses. * indicates $p < .05$. ** indicates $p < .01$.

According to Baron and Kenny (1986), the total effect (c), i.e., the effect of X on Y without controlling for the mediator (M), is part of the precondition for mediation, but according to current opinion, it is no longer necessary to prove mediation and may even lead to false statements following some recent research (e.g., Rucker et al., 2011; Zhao et al., 2010). Both mediation models of the present study 3, with emotional exhaustion and with flourishing as a dependent variable, differ

primarily in that the total effect was not significant for the relationship between servant leadership and emotional exhaustion, and was significant for servant leadership and flourishing. Since the total effect is not a necessary condition for testing a mediation model according to the current research consensus, the analysis could be continued in both cases. Both the a paths (SL \rightarrow BNS, same in both models) and the b paths (BNS \rightarrow EE and BNS \rightarrow FLS) were significant. Also, both indirect effects ($a \times b$) were tested as significant by means of bootstrapping. Servant leadership thus nourishes the basic psychological needs of employees. Moreover, the basic psychological needs of employees promote their mental health, reducing emotional exhaustion and promoting flourishing. In the past, this constellation would have been called “full mediation” because of significant indirect effects and non-significant direct effects (Baron & Kenny, 1986). This expression implies that all possible mediators and suppressors would have been integrated in the model and that there were no measurement errors (Rucker et al., 2011). Since this is rather unlikely, the term indirect-only mediation is more appropriate (Zhao et al., 2010). In this way, it can be assumed that a primary mediator for the relationship between servant leadership and health outcomes was found in basic psychological needs (Rucker et al., 2011), whereby the effect size of the indirect effect for emotional exhaustion was higher with $-.25$ and a 95% CI $[-.44, -.07]$ than the indirect effect for flourishing with $.09$ and a 95% CI $[.02, .18]$.

5.3.4 Discussion

The aim of the third study was to investigate the relationship between servant leadership and employees' mental health. The focus of the object to be researched differs from study 2 because it is not the leaders' mental health that was examined, but that of the employees. Based on theoretical considerations and on promising research results on the relationship between servant leadership and basic need satisfaction, the focus should be on the underlying psychological processes (Chiniara & Bentein, 2016; Mayer et al., 2008; Panaccio, Donia, et al., 2015). Specifically, the satisfaction of basic psychological needs was proposed as the central mediator of the relationship between servant leadership and employees' mental health outcomes. I conducted the present study 3 to test whether basic need satisfaction mediates both the relationship between servant leadership and

emotional exhaustion and the relationship between servant leadership and flourishing.

In a 106-person shortitudinal sample, four different variables were evaluated at three measurement points using psychometric scales: servant leadership, basic need satisfaction, emotional exhaustion, and flourishing. Since not all scales were one-dimensional compared to the previous study 2, no item parceling strategy could be applied in this study (Matsunaga, 2008). As a result, the ratio of free parameters to subjects within the sample was too low (Davcik, 2014). This was also evident in the evaluation of the model fit: CFI and TLI were undercut, while RMSEA was not. On the one hand, the RMSEA is less sensitive to the sample size and is a good measure for applied research to distinguish between correctly vs. incorrectly specified models (Sivo et al., 2006). On the other hand, the scales in separate models with only one scale each showed all good fit parameters. For this reason, instead of an SEM with a complete measurement model, I decided to combine all items into composite scales and to perform the mediation analysis traditionally using linear regression (Hayes, 2013). All scales showed a good reliability. Basic need satisfaction and flourishing showed a slight undercut of the AVE of .50 (Hair et al., 2014), although convergent validity can still be assumed given AVE greater than .40 and CR greater than .60 (Fornell & Larcker, 1981; Huang et al., 2013; Lam, 2012). The nested model comparison for testing the discriminant validity between the latent constructs showed a good differentiation between the investigated variables. Based on hypotheses 1 and 2, a mediation analysis according to Hayes (2013) was performed for servant leadership, basic need satisfaction and emotional exhaustion, and a further mediation analysis was carried out for servant leadership, basic need satisfaction and flourishing. Both models showed the pattern of indirect-only mediation, i.e., the indirect effect in both models was significant and the direct effect was not (Zhao et al., 2010). The indirect effect size of servant leadership on emotional exhaustion via basic need satisfaction was higher with $-.25$ and a 95% CI $[-.44, -.07]$ than servant leadership on flourishing, mediated via basic need satisfaction, with $.09$ and a 95% CI $[.02, .18]$. This implies that the more servant leadership behavior a leader shows, the more the employees' basic psychological needs are satisfied, which leads to reduced stress (indicated by reduced emotional exhaustion) and increased well-

being (indicated by increased flourishing). It was found that the stress-reducing effect is greater than the flourishing effect.

Theoretical implications. The third study has different theoretical implications.

First, the empirical results of the regression analyses confirm that basic need satisfaction is a central mediator between servant leadership and employees' mental health outcomes. This supports the theoretical assumption that servant leadership, through its supportive developmental nature, is able to promote the perception of autonomy, relatedness and competence among employees (Chiniara & Bentein, 2016; Liden, Panaccio, et al., 2014; van Dierendonck & Nuijten, 2011): The need for autonomy can be satisfied, e.g., through the servant leadership dimensions of empowerment, by entrusting important responsibilities to employees and at the same time encouraging them to complete tasks and solutions on their own. In addition to the empowerment dimension, the need for competence can be promoted by the humility and standing back dimensions, which have similarities in their contents to the dimension "helping subordinates to grow and succeed" by Liden et al. (2008). These dimensions include a genuine interest on the side of the leader in the career goals of the employees and their abilities and potential, which enables servant leaders to provide help and support in developing these inherent potentials and consequently satisfying the basic psychological need for competence (Chiniara & Bentein, 2016). Furthermore, servant leaders are able to satisfy the need for relatedness by acting in an affiliative manner and building up strong relationships with their employees (Chiniara & Bentein, 2016; Liden et al., 2008; Zou et al., 2015). This study could not only show that servant leadership nourishes basic psychological needs, but in a further step could show that basic psychological needs mediate between servant leadership and employee mental health. The fact that SDT as a meta-theory explains positive health outcomes through basic psychological needs and autonomous motivation is not novel (Deci et al., 2001; Ryan et al., 2013; Ryan & Deci, 2001). It is an important theoretical contribution to this study that SDT is an important psychological process by which the effects of servant leadership on the mental health of employees can be explained.

Second, the regression analyses showed that the indirect effect, due to the lower regression weight on the *b* path, was lower for flourishing than for emo-

tional exhaustion. This is surprising in that from the perspective of SDT, in terms of positive psychology, it is often postulated to promote eudaemonic well-being (Deci et al., 2001; Ryan et al., 2013; Ryan & Deci, 2001). However, empirical results rather suggest that the promotion of basic psychological needs does not primarily have a well-being promoting effect but an ill-being preventing effect. At this point, the holistic perspective on the phenomenon of (mental) health, in the sense of the two continua model, pays off: satisfied basic psychological needs do not only seem to promote well-being (flourishing), but also seem to be a resource for dealing with stress, which is reflected in the considerably higher effect size of the b path of BNS \rightarrow EE ($b = -1.22$, $SE = .19$, $p < .001$). This protective effect seems to be stronger than the mere promotion of well-being by satisfying basic psychological needs ($b = .46$, $SE = .09$, $p < .001$), at least in the data of this study. According to COR theory (Hobfoll, 1989; Hobfoll et al., 2018), satisfied basic psychological needs could be understood as a resource that on the one hand has the potential to mitigate stress and on the other hand enables individuals to unfold and feel well-being. On a higher level of abstraction, it can be assumed that the satisfaction of basic psychological needs is associated with overall mental health (promoted well-being and reduced ill-being).

Practical implications. In addition to the theoretical implications mentioned above, study 3 provides practically applicable results, which are described in more detail below. Compared to the scarce research on leaders' health (see study 2), there is a broader research base on the relationship between leadership and employee health, which has also been summarized in reviews and meta-analyses (e.g., Gregersen et al., 2011; Harms, Credé, Tynan, Leon, & Jeung, 2017; Inceoglu, Thomas, Chu, Plans, & Gerbasi, 2018; Kuoppala et al., 2008; Skakon et al., 2010; Tepper, 2007). The mere realization that leadership behavior has an impact on employee health is not new for either research or practice. Since I concluded in the previous study that servant leadership should not be "prescribed" because it can potentially have adverse health effects for the leader if it is incongruent with the personality and the motivational strivings that are intertwined with it, it may not be a good measure to blindly recommend that servant leadership should be applied in any setting to promote employee health. Certainly, servant leadership can and should be cultivated whenever possible in the interest of employee

health. The research results provide initial indications for this recommendation. The mediating psychological process underlying the relationship between servant leadership and employee mental health also provides further indications of how health-promoting leadership behavior should be shaped. The central question is how leadership behavior can nurture the basic psychological needs of employees: Giving employees room for maneuver, giving them trust and encouraging them to perform tasks in their own responsibility can satisfy their need for autonomy. The mastery experience associated with the above-mentioned points has a positive effect on self-efficacy (Bandura, 1977a) and also helps to satisfy the need for competence. Moreover, a sincere interest in the personal development of the employee is a way to support the employee in the best possible way in achieving their professional goals, which also facilitates the experience of competence. Finally, a solid, high-quality relationship between employee and leader satiates the need for relatedness. If servant leadership should not be “prescribed”, however, at least the behaviors described above should be adopted to ensure the utmost satisfaction of basic psychological needs. This not only promotes mental health, but also has a positive effect on the autonomous motivation of employees (Deci & Ryan, 2008b; Deci et al., 2001; Ryan et al., 2013; Ryan & Deci, 2000a; van den Broeck et al., 2008). Both have a positive effect on business outcomes: it is a worthwhile investment when leaders dedicate themselves to the needs of their employees. It sets a positive cascade in motion, which is not only in the sense of OHP, but also makes sense from a holistic perspective.

Limitations and future research. Compared to studies 1 and 2, a different research design was used in the third study discussed here. The shortitudinal design has measurement points with a short time lag, here, e.g., 5 days (Dormann & Griffin, 2015). Compared to the cross-sectional design, cause and effect can also be derived from the data if there are several measurement points (Taris & Kompier, 2014). This fundamental advantage of this study, however, is also one of its limitations: Due to the increased effort to motivate the study subjects to participate at three points in time, a rather small sample ($n = 106$) was obtained. Especially when using SEM as a method of analysis, in combination with more comprehensive psychometric scales (e.g., SLS with 30 items), larger samples are conducive to keeping the ratio of participants in the sample to free parameters in the model at a

recommended level (Davcik, 2014). I assume that the evaluation of the measurement model has thus not met the lower limits for CFI and TLI. While CFI and TLI are more sensitive to sample size, the RMSEA is not (Sivo et al., 2006). The RMSEA was the only fit index that did not violate the target value. Since the RMSEA is considered the best measure in applied research to distinguish correct from incorrect models (Sivo et al., 2006), the analysis was nevertheless continued, although linear regression models (Hayes, 2013) were used instead of SEM. Therefore, future research should either try to obtain a larger sample or deliberately use short scales to control sample size to free parameters properly.

As in study 2, the same applies to indirect-only mediation in this study: although basic need satisfaction is a primary psychological process for the relationship between servant leadership and employee mental health, there is still the chance that there are other mediating processes (Zhao et al., 2010). This is also the reason why complete mediation is usually no longer reported: the models adopted are rarely complete and the measurement of psychological phenomena is never without error (Rucker et al., 2011). Thus, if further research finds theoretical arguments for the assumption that other, secondary mediators can be hypothesized, this should be made the subject of future empirical studies. At best, basic need satisfaction, in the sense of competitive testing, will then likewise be integrated into the research design.

Leadership of employees does not take place in a vacuum that excludes employees' individual boundary conditions. However, the current research model of study 3 assumes this since it included no moderating variables. This is a considerable limitation but offers opportunities for future research: It is conceivable, for example, that employees' implicit ideas about how a leader should be and act have an influence on the extent to which a particular leadership style (in this case servant leadership) can satisfy employees' basic psychological needs. This concept is known as implicit leadership theories (ILTs; Epitropaki & Martin, 2004, 2005; Epitropaki et al., 2013; Keller, 1999; Offermann, Kennedy, & Wirtz, 1994). It would be plausible that an employee who has implicit leadership theories about empathetic, sensitive leaders shows better psychological need satisfaction than an employee who "expects" an authoritarian leader. Past research has already shown that the closer ILTs are to the real, explicit profile and behavior of the leader, the higher the quality of the LMX relationship is (Epitropaki & Martin, 2005). It could

be shown that there is an indirect effect of implicit-explicit leadership trait difference, i.e., how similar ILTs and leadership behavior are, on the attitudes and well-being of employees (*ibid.*). The need for future research in study 3 is thus directly addressed. Studies 3 and 4 are tightly interlinked and should be understood as consecutive.

In summary, the third study, with an elaborate research design, which could reduce the risk of common method bias by time lags between the collection of independent, dependent and mediator variables (Podsakoff et al., 2003), has delivered promising results. I strongly recommend a new survey with a larger sample. Also, further potential secondary mediators should not be categorically excluded in further studies. Regarding a moderated mediation model, the following study 4 will directly address the needs of future research and will integrate ILTs of employees as potential moderators into the research model. A further advantage is the partly replicative character of the upcoming study 4, i.e., the results of study 3 will in the best case be further substantiated.

5.4 DOES SERVANT LEADERSHIP ALWAYS MATCH FOLLOWERS' EXPECTATIONS? THE AMPLIFYING AND NEUTRALIZING ROLE OF FOLLOWERS' IMPLICIT LEADERSHIP THEORIES

5.4.1 Hypothesis Development

As in study 3, study 4 focuses on the effects of servant leadership on employee mental health. The results of study 3 have shown the primary psychological process of how servant leadership affects the mental health of employees. The third study therefore fitted into previous findings that servant leadership promotes well-being (Barbuto & Wheeler, 2006; Giolito et al., 2020; Mayer et al., 2008) and reduces stress (Jaramillo et al., 2009; Rivkin et al., 2014). A simultaneous consideration of two continua of mental health showed that servant leadership, mediated through the satisfaction of basic psychological needs, promoted flourishing, and reduced emotional exhaustion (study 3). The empirically substantiated framework of study 3 will be extended in this study by boundary conditions (moderators) in terms of employee characteristics.

In particular, the increased focus on employees (followers) in leadership research, the so-called follower-centered leadership (Shamir, 2007), has led to more attention being paid to the influence of employee perceptions (Eden & Leviatan, 1975; Kenney, Schwartz-Kenney, & Blascovich, 1996; Lord et al., 1984; Mitchell, Larson, & Green, 1977; Offermann et al., 1994): One line of research has suggested that employees develop implicit leadership theories (ILTs) through socialization and previous experiences with leaders, i.e., individual assumptions regarding the characteristics and capabilities that define an (ideal) typical leader. ILTs describe cognitive structures, also known as schemas, that describe characteristics and behaviors that employees expect from their leaders. The ILTs are memorized and triggered when followers interact with a leader (Epitropaki & Martin, 2004). A further line of research deals with implicit follower theories (IFTs), which includes the corresponding view on followers (e.g., Sy, 2010), although these will not be the subject of this study. In ILTs as well as in IFTs, individuals compare the characteristics and behavior of potential leaders or followers with their implicit structures and align their actions in accordance with the result of this comparison (cf. Junker & van Dick, 2014). Both ILTs and IFTs subconsciously influence the way individuals think and act (*ibid.*).

Hunt, Boal, and Sorenson (1990) emphasized the importance of the match between the individuals ILTs and the evaluated person, describing three implications of this match: First, it increases the probability that individuals with a high match to implicit leadership prototypes are more likely to be selected for leadership positions. Second, the match determines the employee's reaction to the leader, i.e., in case of a match between ILTs and leadership behavior, the leader is more likely to be perceived as a real and effective leader. Third, they assumed that leaders who match the ILTs of the employees tend to build high-quality LMX relationships and have more social power, which should ultimately be accompanied by positive outcomes at employee level, such as commitment, satisfaction, etc. A potential explanation for why congruence has a positive effect on LMX was offered by Engle and Lord (1997): Based on Ohlsson's (1996) assumption that learning consists of an error detection and correction process, it was argued that ILTs are internal standards that are relevant for error detection based on subjective comparisons. If there is a mismatch between ILT (internal standard) and the leaders' behavior, attention is drawn to this mismatch (errors), which is perceived

as unpleasant and causes negative emotions (Engle & Lord, 1997). In contrast, congruence of ILTs and leadership behavior leads to less attention-grabbing interactions in the dyadic process between employee and leader, leading to positive emotions (*ibid.*). Epitropaki and Martin (2005) found that the smaller the difference between the prototypical traits shown by the direct leader and the implicit traits (ILTs), the better the LMX quality that employees and leaders could develop together. The same applied not to the explicit-implicit anti-prototype difference (*ibid.*). Furthermore, indirect effects of ILTs on organizational commitment, job satisfaction and well-being were demonstrated, which were mediated by LMX quality (*ibid.*).

Regarding moderating (indirect) relationships between servant leadership and its outcomes, ILTs are salient employee characteristics with remarkable potential to affect existing relationships (Liden, Panaccio, et al., 2014; Panaccio, Donia, et al., 2015). First empirical research findings supported the use of ILTs, e.g., it could be shown that servant leadership resulted in reduced OCB and task performance when employees' desire for servant leadership was low (Meuser et al., 2011). Moreover, servant leadership was associated with lower leadership avoidance when ILTs were congruent with the concept of servant leadership (Lacroix & Pircher Verdorfer, 2017). The moderating effect of ILTs on the relationship between servant leadership and employees' mental health has not yet been investigated.

The basic distinction between leader prototypes and anti-prototypes is split into different dimensions (Epitropaki & Martin, 2004). The original eight dimensions (Offermann et al., 1994) have been reduced to six (Epitropaki & Martin, 2004). The work of Epitropaki and Martin (2004), leader (anti-)prototypes are composed as follows: Leader prototype consists of the dimensions sensitivity, intelligence, dedication and dynamism. Leader anti-prototype consists of the dimension's tyranny and masculinity.

Comparing the dimensions of a leader prototype and a leader anti-prototype with the "ideal-typical" dimensions of servant leadership, it is apparent that one dimension of the leader prototype in particular exhibits conceptual proximity to servant leadership construct. The dimension sensitivity is considered, which is operationalized with the attributes helpful, sincere and understanding (Epitropaki & Martin, 2004). Compared to the other dimensions, sensitivity seems

to be specific and typical for servant leadership, since this leadership theory explicitly puts the interests of others above those of the leader (Greenleaf, 1977; Greenleaf & Spears, 2002; Liden et al., 2008; van Dierendonck, 2011). As it seems to make sense for the basic idea of leader prototypes, the other dimensions are generically applicable to various other leadership theories and therefore appear less specific for servant leadership. Regarding the leader anti-prototype, the tyranny dimension with the attributes domineering, pushy, manipulative, conceit and loud (Epitropaki & Martin, 2004) appears to be the opposite of the servant leadership concept. For this reason, sensitivity is understood as typical and tyranny as atypical for ideal servant leadership behavior.

Based on the theoretical argumentation of Engle and Lord (1997), which is based on assumptions of Ohlsson's (1996) learning theory, it can be presumed that employees with pronounced sensitivity ILT match with servant leadership and that these employees therefore tend to have positive emotions towards their direct leader and that the dyadic interaction is facilitated. It is a prerequisite for leaders to build strong relationships with employees (Engle & Lord, 1997; Epitropaki & Martin, 2005). Accordingly, leaders with a strong relationship to their employees have the potential to satisfy employees' basic psychological needs (Deci & Ryan, 2000, 2008a; Ryan & Deci, 2000a; van den Broeck, Ferris, Chang, & Rosen, 2016; van den Broeck et al., 2008). Furthermore, a match of ILTs with displayed leadership behavior helps leaders to increase social power, which is associated with increased influence on employees (J. G. Hunt et al., 1990). This is a further reason why servant leadership may have a stronger association with the satisfaction of basic psychological needs when employees have a sensitivity ILT. The same reasoning is reversed for employees with tyranny ILT: The mismatch (error) between employees' tyranny ILT and servant leadership triggers negative emotions and a consequent negative development of the dyadic relationship between employee and leader (Engle & Lord, 1997). Due to this emotional burden the leader loses social power towards the employees (J. G. Hunt et al., 1990) and therefore has a weaker relationship to the employee and is thus in a poorer position to satisfy employees' basic psychological needs.

It has been shown that servant leadership is capable of satisfying the basic psychological needs for competence, autonomy and relatedness (Chiniara & Bentein, 2016; Mayer et al., 2008; van Dierendonck et al., 2014) and that the satis-

faction of these needs is associated with positive mental health (Deci et al., 2001; Ryan et al., 2013; Ryan & Deci, 2001). Study 3 has empirically documented that servant leadership had an indirect positive influence on employees' mental health through the psychological process of satisfying needs. With reference to these previous research results, I would like to integrate the ILTs mentioned above, namely sensitivity as amplifier and tyranny as neutralizer, into a moderated mediation model. Derived from the previous theoretical considerations, the following hypotheses are proposed:

Hypothesis 1. Servant leadership reduces employees' emotional exhaustion through processes of autonomous motivation and psychological need satisfaction, with this process being amplified by a sensitivity ILT.

Hypothesis 2. Servant leadership reduces employees' emotional exhaustion through processes of autonomous motivation and psychological need satisfaction, with this process being weakened by a tyranny ILT.

Hypothesis 3. Servant leadership fosters employee flourishing through processes of autonomous motivation and psychological need satisfaction, with this process being amplified by a sensitivity ILT.

Hypothesis 4. Servant leadership fosters employee flourishing through processes of autonomous motivation and psychological need satisfaction, with this process being weakened by a tyranny ILT.

5.4.2 Method

Participants, procedures, and design. The data collection for study 4 was planned as a cross-sectional study. Although the shortitudinal design (Dormann & Griffin, 2015) of study 3 allows the inference of causality out of the data and reduces common method bias, preference was given to the cross-sectional design, since this approach places lower demands on the participants (e.g., high requirements on conscientiousness) and thus the prospect of obtaining even larger sam-

ples is given, which was a major concern of study 3. Furthermore, Dormann et al. (2017) argued that moderation effects, which are in focus of this study, are less susceptible to common method bias compared to main effects. These two arguments have strengthened my decision to choose a cross-sectional design to increase statistical power and obtain valid results.

As in study 3, all variables were reported by the employee. The assessment of servant leadership by the employee appeared to be reasonable, as one study showed that the statistical correlations between the assessment of leadership behavior by the leader themselves and others (e.g., employees) are only moderate (Angela Lee & Carpenter, 2018). Although the same study has shown that the assumption of self-reinforcement by the leader is not tenable, I am convinced that leadership research is primarily concerned with how leadership is perceived by the individual being led (employee; *ibid.*), which indicates an others-assessment of leadership behavior. Furthermore, as in study 3, it seemed appropriate to collect the mediator and dependent variables as self-reports, since both basic psychological needs as well as emotional exhaustion and flourishing are very sensitive private constructs that can best be assessed by the person themselves (D. Chan, 2009; Conway & Lance, 2010). The same applies to implicit leadership theories, so these were also collected as self-reports.

The survey was conducted in 2019 among extra occupational students at a large German university of applied sciences. I recruited the study participants via e-mails as well as through personal presentations at the university. The sample comprised a total of 504 participants who are pursuing a bachelor's degree. Since the students were employed, it was possible to have the leadership behavior of the respective direct leader assessed. The data was not nested. The collection of the data with the tool SoSciSurvey.de was implemented in a technically simple way using a single questionnaire. Compared with the longitudinal design from study 3, study 4 was less time-consuming for study participants, suggesting the study design as an explanation for the higher number of valid participants ($n = 504$). The study participants were on average 27 years old ($SD = 5$). Regarding the gender distribution it was found that 73.2% were men ($n = 369$) and 26.8% were women ($n = 135$). Descriptive statistics for age in total and in gender categories can be found in table 26.

Table 26: Study 4: Means and Standard Deviations of Age

Variable	<i>M</i> (Ov.)	<i>SD</i> (Ov.)	<i>M</i> (Ma.)	<i>SD</i> (Ma.)	<i>M</i> (Fem.)	<i>SD</i> (Fem.)
Age	26.76	5.13	26.54	5.33	27.33	4.50

Note. $n = 504$. Ov. = Overall, Ma. = Male, Fem. = Female.

Psychometric scales. In study 4, the following psychological constructs had to be measured to test the hypotheses presented: Servant leadership as dependent variable, basic need satisfaction as mediator variable, emotional exhaustion and flourishing as dependent variables, and implicit leadership theories as moderating variable. The items of the scales used can be found in appendix A4. I outline the scales used for each of these constructs below, along with reliability measures.

Servant leadership: Servant Leadership Survey (SLS). As already described in chapter 2.3.2, I used the SLS (van Dierendonck & Nuijten, 2011) in the version validated in German (Verdorfer & Peus, 2014). The whole questionnaire comprises of 30 items and is divided into 8 dimensions: empowerment, standing back, accountability, forgiveness, courage, authenticity, humility, and stewardship (van Dierendonck & Nuijten, 2011; Verdorfer & Peus, 2014). Example items of the scale are “My manager helps me to further develop myself”, “My manager is not chasing recognition or rewards for the things he/she does for others”, “If people express criticism, my manager tries to learn from it” or “My manager shows his/her true feelings to his/her staff”. After checking the modification indices, item 19 (“My manager is open about his/her limitations and weaknesses”) was removed from the measurement model because it had cross-loadings to other dimensions. For the higher-order construct servant leadership, comprising the 8 dimensions mentioned, a CR = .96 and an AVE = .63 could be determined. Cronbach’s alpha is not reported for multidimensional constructs at the level of the higher-order construct, instead CR (ω) is reported (Gignac, 2014; R. A. Peterson & Kim, 2013; Viladrich et al., 2017; Watkins, 2017). At the dimensional level, reliability in the present sample was as follows: empowerment ($\alpha = .92$; CR = .90; AVE = .63), standing back ($\alpha = .69$; CR = .69; AVE = .44), accountability ($\alpha = .80$; CR = .81; AVE = .59), forgiveness ($\alpha = .87$; CR = .87; AVE = .68), courage ($\alpha = .84$; CR = .86; AVE =

.76), authenticity ($\alpha = .83$; CR = .83; AVE = .63), humility ($\alpha = .95$; CR = .93; AVE = .77), and stewardship ($\alpha = .75$; CR = .74; AVE = .49). All alpha values were comparable or better than in the validation study by Verdorfer and Peus (2014), which is a sign that the scale worked properly.

Basic psychological needs: Work-related basic need satisfaction scale. As in study 3, the work-related basic need satisfaction scale (W-BNS) by van den Broeck et al. (2010) was used to measure the satisfaction of basic psychological needs in the work context. I reused the back-translated (Brislin, 1970) version of this scale, which has been developed in study 3. The entire questionnaire comprises of 16 items and is divided into 3 dimensions, following the three basic psychological needs (Deci & Ryan, 2000): Need for autonomy, need for competence, need for relatedness (van den Broeck et al., 2010). Example items of the scale are: "I feel like I can be myself at my job" (need for autonomy), "I feel competent at my job" (need for competence), "At work, I feel part of a group" (need for relatedness; van den Broeck et al., 2010). For the higher-order construct basic need satisfaction, comprising the 3 dimensions mentioned above, a CR = .90 and an AVE = .48 could be determined. Although it is a rule of thumb that the AVE should be greater than .50 (Hair et al., 2014), an AVE greater than .40 can be accepted if CR is greater than .60 (Fornell & Larcker, 1981; Huang et al., 2013; Lam, 2012). Cronbach's alpha is not calculated for multidimensional constructs (Gignac, 2014). On the dimensional level, the reliability in the present sample was as follows: Need for autonomy ($\alpha = .85$; CR = .85; AVE = .49), need for competence ($\alpha = .85$; CR = .85; AVE = .59) and need for relatedness ($\alpha = .83$; CR = .83; AVE = .45). All alpha values were comparable or better than in the validation study (van den Broeck et al., 2010), showing that the scale was working properly.

Emotional exhaustion: Maslach burnout inventory (MBI). As in the previous studies, the German version of the MBI (Büssing & Perrar, 1992) was used to measure emotional exhaustion, the central dimension of burnout. The scale consists of 8 items and was measured on a 6-point Likert scale. Example items are "I feel burned out by my work", "Working with people all day is really exhausting for me" and "I feel tired when I get up in the morning and have the next working day ahead of me". After checking modification indices of the overall measure-

ment model, item 8 had to be removed from the scale. After removing item 8, the following measures of reliability were computed: $\alpha = .87$; CR = .59; AVE = .51.

Flourishing: Flourishing Scale. The same as for the MBI scale also applies to the flourishing scale: as in previous studies, to measure the second continuum of mental health, besides emotional exhaustion, the so-called flourishing scale by Diener et al. (2010) was used. Since the scale is only available in English, the German version, developed in the course of this dissertation using the back-translation method (Brislin, 1970), was also utilized in this study. The scale consists of 8 items and was measured on a 7-point Likert scale. Example items are “I am a good person and live a good life”, “I lead a purposeful and meaningful life” and “My social relationships are supportive and rewarding”. Items no. 4 (“I actively contribute to the happiness and well-being of others”) and no. 5 (“I am competent and capable in the activities that are important to me”) has been removed due to poor factor loadings of .46 and .52, improving overall convergent validity of the scale. The following measures of reliability were obtained: $\alpha = .80$; CR = .78; AVE = .40. Here too, an AVE smaller than .50 can be accepted, since the CR is larger than .60, and thus a sufficient convergent validity can still be assumed for an AVE larger than .40 (Fornell & Larcker, 1981; Huang et al., 2013; Lam, 2012).

Implicit Leadership Theories. The ILT inventory of Epitropaki and Martin (2004) was used to capture employees’ implicit leadership theories. This is the latest development of the original version by Offermann et al. (1994). As with most of the scales used in this dissertation, this scale was solely available in English. Therefore, a back-translation of the scale into German was done (Brislin, 1970). The scale consists of 21 items, which are rated on a 9-point Likert scale. These 21 items represent a total of 6 dimensions, which can be combined into two superordinate factors: Leader prototype with the dimensions sensitivity, intelligence, dedication, and dynamism and leader anti-prototype, consisting of the dimensions tyranny and masculinity (Epitropaki & Martin, 2004). For this study two dimensions were explicitly selected and collected, namely sensitivity and tyranny (see the reasoning in the hypothesis development). Example items are attributes such as “Helpful” and “Understanding” or “Pushy” and “Domineer-

ing". In the tyranny dimension, covariances between some items were allowed because there is conceptual overlap, such as "Pushy" and "Domineering" as well as "Conceited" and "Selfish". The following reliability values were determined for the sensitivity dimension: $\alpha = .82$; CR = .83; AVE = .62. For the tyranny dimension the following reliability values were obtained: $\alpha = .90$; CR = .87; AVE = .59.

5.4.3 Results

The results of the statistical analyses are presented below. Starting with the validation of the measurement model by using a CFA, followed by the descriptive statistics and intercorrelation matrix and finally, the testing of the developed hypotheses by means of suitable procedures, such as multiple regression analysis.

Measurement models. On one hand, in the present study, it is required to validate the complete measurement model with respect to fit indices, i.e., χ^2 , CFI, TLI and RMSEA, where CFI and TLI $\geq .90$ and RMSEA $\leq .08$ (L. Hu & Bentler, 1999). On the other hand, it is mandatory to check the discriminant validity between the different variable's servant leadership (independent variable), basic need satisfaction (mediator variable), sensitivity and tyranny ILT (moderator variables), as well as emotional exhaustion and flourishing (dependent variable), all of which have been evaluated by a single source. For this purpose, the procedure called nested model comparison (Hutchens, 2017) was used, i.e., two latent variables from the measurement model (e.g., basic need satisfaction and flourishing) are combined to a single latent factor and then compared with the original model. This procedure was performed for all combinatory options of the latent variables. In case the χ^2 difference test is significant, the χ^2 from the merged model is significantly higher than the χ^2 of the baseline model, indicating discriminant validity between the two merged latent variables.

The original model with the variables servant leadership (SL), basic need satisfaction (BNS), emotional exhaustion (EE), flourishing (FLS), and sensitivity ILT (SEN) and tyranny ILT (TYR) had the following fit indices: χ^2 (2110) = 3963.90, RMSEA = .04, CFI = .91, TLI = .90. The fit indices indicate a proper model fit, as they exceed or fall below the defined cut-off criteria (L. Hu & Bentler, 1999). To test the discriminant validity, nested model comparisons were carried out, as

described above. All subsequent nested model comparisons are based on this model and compare it to the nested model. The results of the tests are shown in table 27. The results indicate that discriminant validity exists between the pairwise merged latent variables due to the significant increase in χ^2 values. Since there is a significant χ^2 difference test for all merged latent variables, discriminant validity can be assumed.

Table 27: Study 4: Nested Model Comparison with χ^2 -Difference Test

Model	Estimate	CI lower	CI upper	Df	Δ Df	χ^2	$\Delta\chi^2$
SLS~~EE	-.24	-.33	-.15	2115	5	5210.10	1246.2***
SLS~~FLS	.20	.10	.30	2115	5	4680.82	716.91***
SLS~~BNS	.63	.54	.71	2115	5	4146.98	183.08***
SLS~~TYR	-.15	-.25	-.05	2115	5	5032.17	1068.27***
SLS~~SEN	.33	.24	.42	2115	5	4601.53	637.63***
EE~~FLS	-.42	-.50	-.33	2115	5	4517.92	554.01***
EE~~BNS	-.55	-.64	-.46	2115	5	4188.68	224.78***
EE~~TYR	.13	.04	.23	2115	5	5061.05	1097.15***
EE~~SEN	-.17	-.26	-.07	2115	5	4686.53	722.63***
FLS~~BNS	.53	.43	.63	2115	5	4162.17	198.26***
FLS~~TYR	-.11	-.21	-.01	2115	5	5047.39	1083.49***
FLS~~SEN	.19	.09	.29	2115	5	4667.08	703.18***
BNS~~TYR	-.22	-.33	-.11	2115	5	4331.49	367.59***
BNS~~SEN	.36	.26	.47	2115	5	4272.51	308.61***
TYR~~SEN	-.53	-.61	-.46	2115	5	4358.19	394.29***

Note. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

In addition, I calculated the AVE of the latent variables. As already reported in the section on psychometric scales, the AVE of SL, BNS, EM, FLS, SEN, TYR were .63, .48, .51, .40, .62, and .59, respectively. The maximum value from the squared correlations (maximum shared variance) of the latent variables, calculated directly from the measurement model including error terms, ranged between .28 and .39. Since the maximum shared variance does not exceed the AVE for any of the constructs, I can assume discriminant validity between the latent variables.

Both the nested model comparison and the test of Fornell and Larcker (1981) showed discriminant validity for the latent variables surveyed. Table 28 below summarizes the reliability and validity of the psychometric scales used in this sample.

Table 28: Study 4: Reliability and Validity of the Used Scales

Scale	Dimension(s)	Cronbach's α	CR (ω)	AVE	MSV
SLS	all dimensions		.96	.63	.39
W-BNS	all dimensions		.90	.48	.39
MBI	Em. Exhaustion	.87	.85	.51	.31
FLS	unidimensional	.80	.78	.40	.28
ILT	Sensitivity	.82	.83	.62	.29
ILT	Tyranny	.90	.87	.59	.29

Note. Maximum shared variance (MSV) has been calculated directly from the correlation matrix of latent variables of the measurement model including error terms. Cronbach's α is not reported for higher-order multidimensional variables, instead CR (ω) is reported (Gignac, 2014; R. A. Peterson & Kim, 2013; Viladrich et al., 2017; Watkins, 2017).

Descriptive statistics and intercorrelation matrix. The intercorrelation matrix shown in table 29 shows the descriptive statistics and correlation coefficients with their 95% confidence intervals. The CIs stated in the table represent a plausible range for r , so that one can be 95% sure that the CI determined here includes r (Cumming & Finch, 2005). In the correlation analysis, the latent variables were significantly and hypothesis-conforming correlated: servant leadership and basic need satisfaction ($r = .42$; $p < .01$) as well as basic need satisfaction and the assumed outcome variables emotional exhaustion ($r = -.42$; $p < .01$) and flourishing ($r = .44$; $p < .01$). A significant correlation was observed between servant leadership and flourishing ($r = .16$; $p < .01$), servant leadership and emotional exhaustion ($r = -.19$; $p < .01$) and emotional exhaustion and flourishing ($r = -.37$; $p < .01$). Looking at the two moderator variables, I likewise found significant correlations. Servant leadership was correlated positively with sensitivity ($r = .29$; $p < .01$) and negatively with tyranny ($r = -.12$; $p < .01$). This can be explained as ILTs can be both cause

and effect of a dyadic leader-follower relationship, i.e., both influence each other (Engle & Lord, 1997). Furthermore, a negative correlation was found between sensitivity and tyranny ($r = -.48$; $p < .01$), indicating that both should be understood as antithesis, as already conceptualized with leader prototype and leader anti-prototype by Epitropaki and Martin (2004). Further correlation coefficients can be found in table 29.

Table 29: Study 4: Means, Standard Deviations, and Correlations with Confidence Intervals

Var.	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. SLS	3.86	0.71					
2. BNS	3.70	0.55	.42** [.34, .49]				
3. EE	2.76	0.99	-.19** [-.27, -.10]	-.42** [-.49, -.35]			
4. FLS	5.77	0.65	.16** [.08, .25]	.44** [.37, .51]	-.37** [-.44, -.29]		
5. SEN	7.11	1.36	.29** [.21, .37]	.29** [.21, .37]	-.17** [-.25, -.08]	.15** [.06, .23]	
6. TYR	3.44	1.77	-.12** [-.21, -.03]	-.16** [-.24, -.07]	.14** [.05, .22]	-.10* [-.18, -.01]	-.48** [-.54, -.41]

Note. SL = Servant leadership, BNS = Basic need satisfaction, EE = Emotional exhaustion, FLS = Flourishing, SEN = Sensitivity ILT, TYR = Tyranny ILT. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014). * indicates $p < .05$. ** indicates $p < .01$.

Hypotheses testing. I tested the hypotheses using multiple linear regression analysis as proposed by Preacher et al. (2007). For all hypotheses to be tested, I followed the same methodological approach (ibid.): Mean centering of the variables that define products, i.e., the independent variable (X) and the moderator variable (W). Furthermore, a non-parametric bootstrapping analysis was used to estimate the 95% confidence intervals, which is important for interpreting indirect effects (Preacher & Hayes, 2004; Preacher et al., 2007). In the following analyses, 10,000 bootstrapped samples were generated each. In this method, moderated mediation is significant when the 95% confidence interval of the indirect effect excludes zero (ibid.). The results of the indirect effect are presented conditionally so that the indirect effect is computed for different levels of the moderator, i.e., +/- 1 SD as well as for the mean value.

First, I present the results for emotional exhaustion in combination with the moderator sensitivity ILT (hypothesis 1). The results showed that the direct effect, i.e., controlled for the mediator basic need satisfaction, of servant leadership on emotional exhaustion was not significant ($b = -.005$, $SE = .06$, $p = .94$, ns). The indirect effect of servant leadership on emotional exhaustion, mediated by basic need satisfaction, at a mean level of sensitivity ILT was $-.20$ with 95% CI $[-.27, -.14]$. Because of the significant indirect and the non-significant direct effect, indirect-only mediation can be assumed, i.e., it is unlikely that there are further mediators (Zhao et al., 2010). The indirect effect decreased at -1 SD level and increased at +1 SD level of the moderator. Thus, the higher the employees' sensitivity ILT, the greater the effect of servant leadership on basic need satisfaction. As a result, the indirect effect of servant leadership on emotional exhaustion was increased for employees with a high sensitivity ILT (+1 SD level). To visualize the effect, figure 29 shows an interaction plot, where the solid line represents the indirect effect, and the dashed lines indicate the upper and lower limits of the 95% confidence interval.

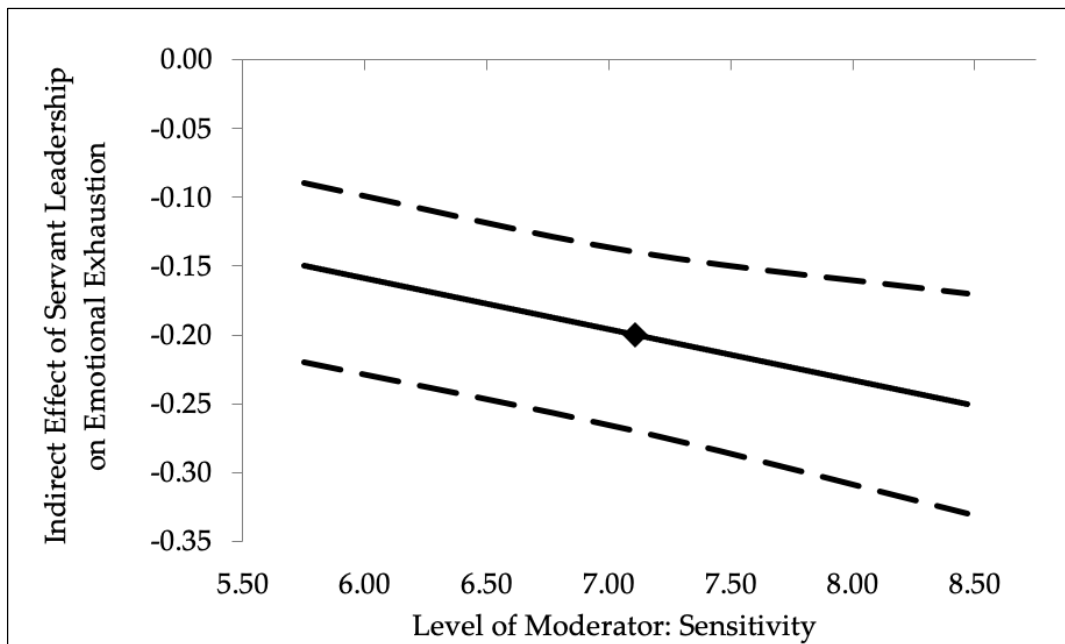


Figure 29: Conditional Indirect Effect of SL on EE for Moderator Sensitivity

Second, the results for emotional exhaustion in combination with the moderator tyranny ILT are presented (hypothesis 2). The results showed that the direct effect, i.e., controlled for the mediator basic need satisfaction, of servant leadership on emotional exhaustion was not significant ($b = -.005$, $SE = .06$, $p = .94$, ns). The results are consistent with the foregoing, since it is the same regression, without taking the moderator into account. The indirect effect of servant leadership on emotional exhaustion mediated by the satisfaction of basic needs at mean level of tyranny ILT was $-.23$ with 95% CI $[-.30, -.17]$. Due to the significant indirect and the non-significant direct effect, indirect-only mediation can be assumed, i.e., it is not probable that there are additional mediators (Zhao et al., 2010). The indirect effect increased at -1 SD level and decreased at +1 SD level of the moderator. The lower the employee's tyranny ILT, the higher the effect of servant leadership on basic need satisfaction. Consequently, the indirect effect of servant leadership on emotional exhaustion was increased for employees with low tyranny ILT (-1 SD level). To visualize the effect, figure 30 shows an interaction plot, where the solid

line represents the indirect effect, and the dashed lines indicate the upper and lower limits of the 95% confidence interval.

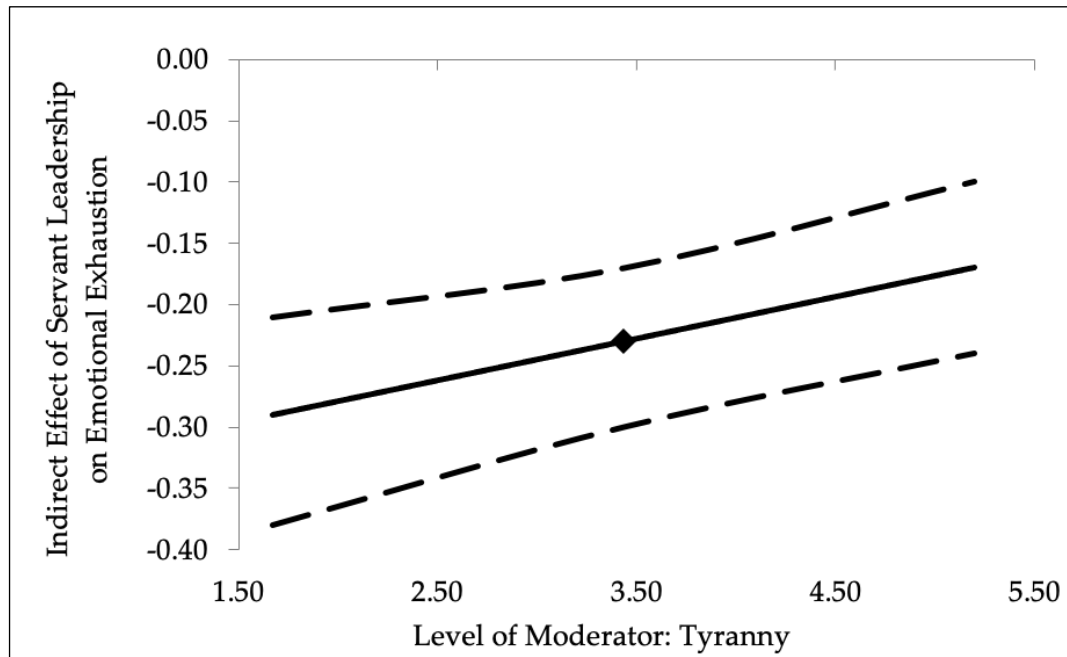


Figure 30: Conditional Indirect Effect of SL on EE for Moderator Tyranny

In the following table 30, I show the results of the conditional indirect effects for servant leadership and emotional exhaustion.

Table 30: Study 4: Moderated Mediated Results for Servant Leadership on Emotional Exhaustion via Basic Need Satisfaction Across Levels of Moderators

Moderator	Level	Conditional indirect effect	SE	LLCI	ULCI
Sensitivity ILT	Low	-.15	.03	-.22	-.09
	Medium	-.20	.03	-.27	-.14
	High	-.25	.04	-.34	-.17
Tyranny ILT	Low	-.29	.04	-.38	-.21
	Medium	-.23	.03	-.30	-.17
	High	-.17	.04	-.24	-.10

Note. $n = 504$. Low indicates -1 SD, Medium indicates mean, and High indicates +1 SD level of the respective moderator variable. Lower limit (LLCI) and upper limit (ULCI) were computed for 95% CIs.

Third, the results for flourishing in combination with the moderator sensitivity ILT are presented (hypothesis 3). The results showed that the direct effect, i.e., controlled for the mediator basic need satisfaction, of servant leadership on flourishing was not significant ($b = -.03$, $SE = .04$, $p = .44$, ns). The indirect effect of servant leadership on flourishing, mediated by basic need satisfaction, at mean level of sensitivity ILT was .14 with 95% CI [.10, .19]. Due to the significant indirect and the non-significant direct effect, indirect-only mediation can be assumed, i.e., it is unlikely that there are further mediators (Zhao et al., 2010). The indirect effect decreased at -1 SD level and increased at +1 SD level of the moderator. Thus, the higher the employees' sensitivity ILT, the higher the effect of servant leadership on basic need satisfaction. As a result, the indirect effect of servant leadership on flourishing was increased for employees with a high sensitivity ILT (+1 SD level). To visualize the effect, figure 31 shows an interaction plot, where the solid line represents the indirect effect, and the dashed lines indicate the upper and lower limits of the 95% confidence interval.

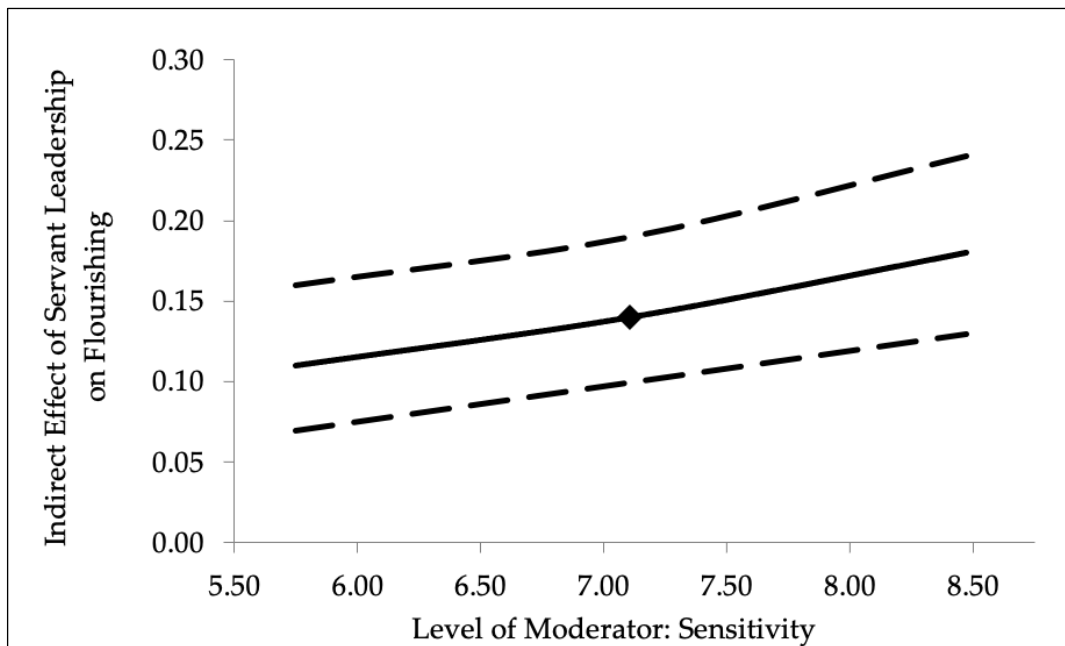


Figure 31: Conditional Indirect Effect of SL on FLS for Moderator Sensitivity

Finally, the results for flourishing in combination with the moderator tyranny ILT are presented (hypothesis 4). The results showed that the direct effect, i.e., controlled for the mediator basic need satisfaction, of servant leadership on emotional exhaustion was not significant ($b = -.03$, $SE = .04$, $p = .44$, ns). These results are consistent with the foregoing, since it is the same regression, without taking the moderator into account. The indirect effect of servant leadership on flourishing mediated by the satisfaction of basic needs at mean level of tyranny ILT was .16 with 95% CI [.12, .21]. Because of the significant indirect and the non-significant direct effect, indirect-only mediation can be assumed, i.e., it is not probable that there are additional mediators (Zhao et al., 2010). The indirect effect increased at -1 SD level and decreased at +1 SD level of the moderator. The lower the employee's tyranny ILT, the higher the effect of servant leadership on basic need satisfaction. Hence, the indirect effect of servant leadership on flourishing was increased for employees with low tyranny ILT (-1 SD level). To visualize the effect, figure 32 shows an interaction plot, where the solid line represents the indi-

rect effect, and the dashed lines indicate the upper and lower limits of the 95% confidence interval.

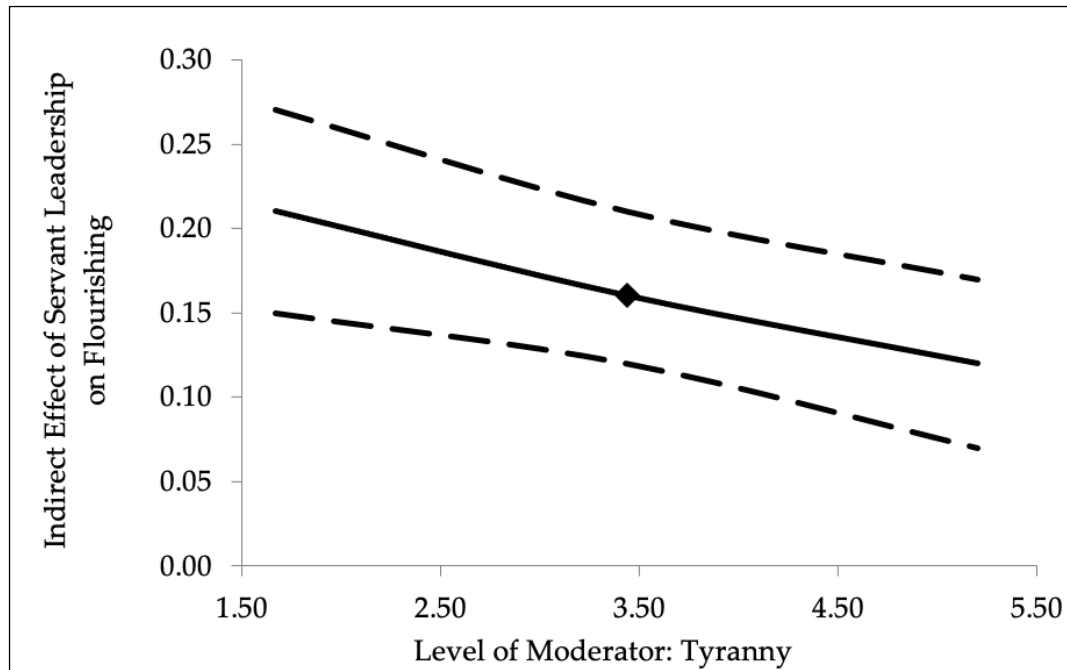


Figure 32: Conditional Indirect Effect of SL on FLS for Moderator Tyranny

Detailed results of the conditional indirect effects of servant leadership on flourishing can be found in table 31.

Table 31: Study 4: Moderated Mediated Results for Servant Leadership on Flourishing via Basic Need Satisfaction Across Levels of Moderators

Moderator	Level	Conditional indirect effect	SE	LLCI	ULCI
Sensitivity ILT	Low	.11	.02	.06	.16
	Medium	.14	.02	.10	.19
	High	.18	.03	.12	.24
Tyranny ILT	Low	.21	.03	.15	.27
	Medium	.16	.02	.12	.21
	High	.12	.03	.07	.18

Note. $n = 504$. Low indicates -1 SD, Medium indicates mean, and High indicates +1 SD level of the respective moderator variable. Lower limit (LLCI) and upper limit (ULCI) were computed for 95% CIs.

5.4.4 Discussion

The aim of the fourth study was to test the mediation model established in study 3 (SL \rightarrow BNS \rightarrow EE/FLS) under boundary conditions of different levels of implicit leadership theories, sensitivity and tyranny. Based on theoretical considerations as well as promising research results on the relationship between servant leadership and basic psychological needs (Chiniara & Bentein, 2016; Mayer et al., 2008; Panaccio, Donia, et al., 2015), the focus of this study was on how the underlying psychological process changes under different individual boundary conditions. Employees' ILTs are salient characteristics that can affect existing relationships such as servant leadership and the satisfaction of basic psychological needs. This has been emphasized in the literature (Liden, Panaccio, et al., 2014; Panaccio, Donia, et al., 2015) and deduced in the hypothesis development. Therefore, I assumed that a high congruence between servant leadership ideal and ILT has a positive effect on basic need satisfaction. For sensitivity ILT and servant leadership a high congruence was supposed due to the conceptual overlap. In contrast, a low congruence has a negative effect on the relationship between servant leadership and basic need satisfaction. I conceptualized tyranny ILT as opposite to

servant leadership and thus as incongruent. In summary, I postulated it that sensitivity ILT has a positive effect on the indirect effect of servant leadership on employees' mental health and that tyranny ILT has a negative effect on employees' mental health.

In a cross-sectional sample of 504 subjects, I gathered six different variables using psychometric scales: servant leadership, basic needs satisfaction, emotional exhaustion, flourishing, as well as sensitivity and tyranny ILT. As in study 3, I could not apply item parceling strategy due to the multidimensionality of two scales (Matsunaga, 2008). The established measurement model showed good fit indices, compared to study 3, where CFI and TLI were undercut. The fact that in study 4 the measurement model, which was extended by two variables, showed good fit indices, convinced me that all scales used –even in study 3– worked properly. All scales showed good reliability. The nested model comparison to check discriminant validity between the latent constructs showed a good discrimination between the studied variables. Methodologically, however, I followed Preacher et al. (2007) and, instead of an SEM with a complete measurement model, I combined all items of a scale to one composite measure each and carried out the moderated mediation analysis traditionally using linear regression (e.g., Hayes, 2013; Preacher et al., 2007). Based on hypotheses 1 to 4, moderated mediation analyses were performed. All models showed the pattern of indirect-only mediation, i.e., the indirect effect was significant in all models and the direct effect was not (Zhao et al., 2010). The regression analyses showed that a high level of sensitivity ILT and a low level of tyranny ILT have a positive influence on the indirect effect between servant leadership and employees' mental health. This implies that the better the employee's ILTs match the paradigm of a servant leader (high sensitivity ILT and low tyranny ILT), the better servant leadership "functions" in terms of psychological need satisfaction, which contributes to the reduction of emotional exhaustion and the promotion of flourishing.

Theoretical implications. Like all previous studies, study 4 has different theoretical implications, which are discussed below.

Further substantiating the results of study 3, the satisfaction of basic psychological needs was also shown in study 4 as a central mediator between servant leadership and employees' mental health outcomes. In study 4 all models showed

the pattern of indirect-only mediation, which suggests that other mediators are unlikely (Zhao et al., 2010). Previous studies have already shown that servant leadership in its supportive, developing and generous nature satisfies the need for autonomy, relatedness, and competence (Chiniara & Bentein, 2016; Liden, Panaccio, et al., 2014; van Dierendonck & Nuijten, 2011). Similarly, the fact that SDT as a meta-theory explains positive health outcomes through the satisfaction of these same basic needs and autonomous motivation is not a new research finding (Deci et al., 2001; Ryan et al., 2013; Ryan & Deci, 2001). However, the fact that the results of study 4, in addition to those of study 3, have demonstrated in two samples that SDT is applicable as a framework to explain the underlying psychological process between servant leadership and employees' mental health outcomes is a valuable contribution to literature.

Consistent with study 3, the results of study 4 also showed that the indirect effect of servant leadership on flourishing, in terms of effect size, was lower than the indirect effect of servant leadership on emotional exhaustion. As discussed in study 3, the holistic perspective on mental health through the two continua model, with emotional exhaustion as ill-being indicator and flourishing as well-being indicator, proved to be successful. Following the guiding principle of positive psychology, literature assumes that satisfying basic psychological needs primarily promotes eudaemonic well-being (Deci et al., 2001; Ryan et al., 2013; Ryan & Deci, 2001). Two studies have now shown that this well-being promoting effect exists. However, this effect is less prominent than a protective effect, in the sense of ill-being prevention. This is a relevant contribution from a theoretical perspective, since the satisfaction of basic psychological needs has a positive effect on overall mental health in two ways: On the one hand, satisfied basic psychological needs represent a resource for buffering stress (Hobfoll, 1989; Hobfoll et al., 2018), on the other hand, promotes individuals' flourishing.

An additional key finding is that from the perspective of follower-centered leadership (Shamir, 2007), the employees' cognitive prototypes played a crucial role in how leadership affects the employees themselves. Of particular relevance was how the match between individuals ILTs and the actual leader is (Engle & Lord, 1997; J. G. Hunt et al., 1990). A mismatch is perceived as unpleasant and triggers negative emotions, which puts a burden on the dyadic relationship between employee and leader (Engle & Lord, 1997). I have assumed that the sensi-

tivity dimension is closest to the ideal of a servant leader (leader prototype) and the tyranny dimension is a counter-concept to servant leadership (leader anti-prototype). Consequently, it could be assumed that employees with a high sensitivity ILT and those with a low tyranny ILT are particularly receptive to servant leadership. The match between employees' expectations of a leader (ILTs) and the actual behavior of the leader lays the foundation for a harmonious relationship (Engle & Lord, 1997), which in turn is the foundation for the satisfaction of basic psychological needs. The empirical findings from the present sample suggested that all the hypotheses put forward could be accepted. The psychological process between servant leadership and mental health outcomes was moderated by ILTs in that employees with a high sensitivity ILT and a low tyranny ILT had a strengthened effect, i.e., lower emotional exhaustion and higher flourishing. Conversely, a low sensitivity ILT and a high tyranny ILT weakened this effect. This example shows how important it is to investigate individual boundary conditions (Shamir, 2007).

Practical implications. The results of study 4 complement the practical implications of study 3, and as noted in study 3, the results of study 4 support the assumption that servant leadership should not be blindly prescribed. On the one hand, possible adverse effects on the leaders' mental health can result from a dictation of servant leadership. In this respect, reference is made to the research results of study 2. On the other hand, the present study 4 showed that there are also inter-individual differences of employees, which can have positive or negative effects on the relationship between servant leadership and mental health outcomes. These ILTs have a strengthening effect on basic psychological need satisfaction if they are congruent with the ideal of servant leadership, and a weakening effect on basic psychological need satisfaction if they are incongruent with the servant leadership idea. According to Engle and Lord (1997), congruence between ILT and leadership behavior can be both cause and effect of the dyadic exchange process. ILTs can be considered stable in the short term and can be influenced by liking and LMX quality in the long term (ibid.). Especially the long-term view gives hope, because cognitive alignment in dyads is more likely to occur when more contact and mutual influence is exerted (ibid.). In view of the results, there may be difficulties and slowdowns in organizational development and occupa-

tional health management if leadership guidelines are to be shifted in the direction of servant leadership. If employees previously had tyrannical leaders, they will, through cognitive alignment, expect tyrannical leaders in the future (Engle & Lord, 1997). As a result, positive effects of servant leadership on employee health may be weakened. Therefore, when changing the leadership paradigm to servant leadership, extended communication campaigns and a slow pace of change are critical success factors, because employees' ILTs cannot be flipped like a switch, but can only be changed in a mutual exchange process between leader and employee. In sense of practical implications this means that despite the attenuating effect of a leader anti-prototype (low sensitivity, high tyranny) on the relationship between servant leadership and mental health, the ILTs can be transformed into cognitive structures congruent with servant leadership through the long-term development of a high-quality LMX relationship (high sensitivity, low tyranny). Thus, with a focus on employees' mental health, it becomes clear that servant leadership behavior is desirable. Not at least, because there is no harm for those employees who embody anti-prototype leadership theories (low sensitivity, high tyranny). Individuals with low sensitivity or high tyranny only experience a weaker positive effect on their mental health when led by a servant leader. It is a good investment if the servant leaders dedicate themselves to the basic psychological needs of their employees. With a focus on the mental health of the leader, the warning from study 2 remains: The motivational structures of the potential leader have to match the requirements of servant leadership (communion striving). Otherwise, the leader might not perceive their work as meaningful, which would consequently threaten their own mental health.

Limitations and future research. The most relevant limitation of study 4 is the study design used. In principle, no causal conclusions can be drawn from the data of cross-sectional studies (Taris & Kompier, 2014). Furthermore, this research design is rather susceptible to common method bias (Podsakoff et al., 2003). However, interaction effects in moderator analyses are considered less prone to common method bias (Dormann et al., 2017). When planning a research project, the advantages and disadvantages of different designs must be weighed up. Since longitudinal data from study 3 were already available with a nearly identical model and considering that the sample size and the resulting statistical power was a

limitation of study 3, I decided to choose a research design in which study participants could be recruited with less resistance to increase the sample size. As potential bias is of minor relevance for interaction effects (Dormann et al., 2017), I finally preferred a cross-sectional study design. From the disadvantages of a cross-sectional design, a potential for future research arises at the same time: The same model could, for example, be collected in a shortitudinal design (Dormann & Griffin, 2015).

Compared with study 3, the distribution of gender among study participants showed an almost 1:1 inverted ratio. I could at most speculate about the cause and would also assume the study design: Since the complexity of the survey procedure was already described in the summary of the test instruction (e.g., several measurement points in study 3 or formation of leader-follower dyads in study 1/2), the potential participants were able to anticipate the effort involved. With regard to conscientiousness, we know that it describes characteristics that are related to organization, self-discipline and impulse control, which is basically conducive to following rules or pursuing goals (Weisberg, DeYoung, & Hirsh, 2011). Compared to men, women show higher scores on facets of conscientiousness, such as dutifulness and self-discipline (Costa, Terracciano, & McCrae, 2001; Feingold, 1994; Weisberg et al., 2011). These gender-specific differences may explain the different gender distribution in the present sample. It could be shown, for example, that there are significant correlations between the Big Five and the ILT dimensions (Keller, 1999): Thus, conscientiousness not only correlated with the dedication dimension ($r = .26; p < .01$), but also with charisma ($r = .14; p < .05$) and negatively with tyranny ($r = -.18; p < .01$). However, there was no significant correlation between conscientiousness and sensitivity. If the reason for the gender distribution was due to conscientiousness, this would imply that there were more individuals in the sample who exhibited low tyranny ILT. Due to the sample size and the unobtrusive means and standard deviations of the focal variables in the sample, I do not assume that there was a relevant bias in the study due to gender distribution.

Similar to studies 2 and 3, the following holds true for indirect-only mediation: while this typification of mediation suggests that there are most likely no other mediators besides the mediator under investigation, further mediators cannot be strictly ruled out (Zhao et al., 2010). This is due in part to incomplete mod-

els and measurement errors in the social sciences (Rucker et al., 2011). For future research, therefore, the following applies: if there are theoretically founded proposals for further mediators between servant leadership and emotional exhaustion and flourishing, these should be tested, ideally competing with psychological need satisfaction.

Regarding the actual focus of study 4, the moderating effect of ILTs, there is likewise potential future research. In particular, the following statement by Engle and Lord (1997) opens a field for future research: "It is important to realize that congruence in implicit theories can be both a cause and a result of dyadic process" (p. 992). In this study, cross-sectional snapshots of implicit leadership theories were collected. If the development of ILTs were considered over a longer period of time, these cognitive structures would change depending on the experiences with the leader (Engle & Lord, 1997). Study 4 could show that ILTs that do not match servant leadership result in a reduction of the positive effects of servant leadership on mental health. It remains an open question how the ILTs of an employee change over time when the employee is headed by a servant leader. Do the cognitive structures follow the social interaction with the servant leader? Does a low sensitivity ILT then become a high sensitivity ILT? Does a high tyranny ILT become a low tyranny ILT? These are questions that can be addressed by future research. If the ILTs "align" to a certain extent with the leadership style, it would only be a matter of time until servant leadership can have a growing positive effect on mental health. On the other hand, the perceived leadership behavior also follows the ILTs (Junker & van Dick, 2014), which would consequently have the opposite effect. These and further questions should be investigated in future research to better disentangle the complex web of leadership, psychological processes, individual boundary conditions, and health-related outcomes.

6 OVERALL DISCUSSION AND CONCLUDING REMARKS

“A philosopher who is not taking part in discussions is like a boxer who never goes into the ring.”

Ludwig Wittgenstein, Philosopher

Having presented all four studies, it is now the turn to discuss the results of this thesis across the board. Compared to the dedicated discussions of the respective studies, in this chapter I will take the opportunity to discuss the findings of the studies in an overarching manner. To make a relevant contribution to research and practice, in addition to the theories used in the hypothesis development of the respective studies, further OHP theories are used to frame the overall discussion.

Based on steadily increasing numbers of cases of mental illness caused by stress and strain at work (e.g., Grobe et al., 2019; Knieps & Pfaff, 2019; Marschall et al., 2020, 2017), this thesis addressed the question of how, when, and why servant leadership affects employees' and leaders' mental health. In the first chapters, I laid the theoretical foundation from OHP and leadership psychology and I conducted a thorough analysis of the state of research. The latter was primarily concerned with previous research that investigated the relationship between leadership behavior and mental health and its mediators and moderators. From the previous research results it became clear that servant leadership in particular can be a promising leadership theory to positively influence mental health outcomes of both employees and leaders (e.g., Panaccio, Donia, et al., 2015). Therefore, the following research questions should be answered by the empirical studies:

- Why do leaders engage in servant leadership?
- How is enacting in servant leadership related to leaders' emotional exhaustion and flourishing?
- How servant leadership relates to followers' emotional exhaustion and flourishing?
- Does servant leadership always match followers' expectations?

These research questions cover antecedents of servant leadership, psychological processes, and boundary conditions on mental health outcomes, in the sense of a two continua model of mental health, focusing on both employees and leaders. The four studies conducted in this thesis have answered these questions. Study 1 answered the first question regarding the antecedents of servant leadership. Study 2 focused on the psychological process between servant leadership and the mental health of the leader. Study 3 examined the psychological process between servant leadership and mental health at the employee level and study 4 added individual boundary conditions to the model to test when servant leadership has a stronger or weaker effect on mental health outcomes. To recapitulate the results of the four different studies, I summarize the evidence-based findings in table 32 on the following page.

Table 32: Key Results of the Four Empirical Studies

Study #	Key Results
1	Compassionate love for non-intimate others turned out to be the most meaningful antecedent of servant leadership in this study, by explaining variance over and above narcissism in the criterion variable. Hence, compassionate love should be integrated into the nomological network of servant leadership
2	At leader level, both mental health indicators (emotional exhaustion and flourishing) were positively affected by servant leadership. This relationship was mediated through the psychological mechanism of experienced meaningfulness. Servant leadership promoted experienced meaningfulness at work, which in turn had a negative effect on emotional exhaustion and a positive effect on flourishing.
3	At employee level, both indicators for mental health (emotional exhaustion and flourishing) were positively affected by servant leadership. This relationship was mediated via the psychological process of fulfilling basic psychological needs (autonomy, competence, relatedness). Servant leadership satiates the basic psychological needs, which in turn are associated negatively with emotional exhaustion and positively with flourishing.
4	The relationships described in study 3 are influenced by the boundary condition of implicit leadership theories. If the employee has a prototypical idea of a tyrannical leader, this weakens the positive outcome of servant leadership on mental health. If the employee in turn has a prototypical idea of an empathetic leader (sensitivity), this additionally strengthens the connection between servant leadership and mental health via basic need satisfaction.

In the following chapters, I discuss the results of the four studies mentioned in their entirety regarding theoretical and practical implications, limitations, and future research. This overarching discussion brings the results together and represents the conclusion of this thesis. I am pleased that the empirical studies undertaken were in each case capable of providing relevant contributions to science

and practice. The knowledge of the research field between OHP and leadership psychology, especially servant leadership, has increased incrementally with the empirical contributions of this thesis.

6.1 THEORETICAL IMPLICATIONS

Regarding the first research question, why leaders engage in servant leadership behavior, study 1 examined three potential variables as antecedents. Confirming earlier research, I showed that the less narcissistic a leader is, the more servant leadership behavior is shown (S. J. Peterson et al., 2012). Following existing theoretical work (van Dierendonck & Patterson, 2015), it was shown that compassionate love explains variance in servant leadership over and above narcissism. The concept of Brouns et al. (2020) that compassionate love for non-intimate others and narcissism are mere counter-concepts (subclinical self-love vs. compassionate love for non-intimate others) could only be partly affirmed. Instead, it can be assumed that while a non-narcissistic personality is a prerequisite for being able to experience compassionate love for non-intimate others, it does not necessarily follow that this will occur. That is, a non-narcissistic personality alone does not make a servant leader. Rather, a non-narcissistic personality, coupled with a deep compassionate love for non-intimate others, promotes servant leadership behavior. The results of the stepwise regression analysis and the finding that compassionate love explained incremental variance in servant leadership suggested this compared to narcissism. The results of the statistical analysis for religious quest orientation showed rather small effect sizes. Although Wallace (2007) described high concordance between biblical worldview and servant leadership, religiousness could not be determined as a direct antecedent of servant leadership. It is conceivable that it is not religiousness per se, but the characteristics attributed to religious persons, such as anti-authoritarianism, compassion and freedom from prejudice (e.g., Leak & Finken, 2011; McCleary et al., 2011), that promote servant leadership behavior. Thus, there would be a small to zero direct effect, but a mediated effect between religious quest orientation and servant leadership. The theoretical contribution of study 1 extends the nomological network, namely the antecedents, of servant leadership. This incremental increase in knowledge, beyond the already researched and documented antecedents (e.g.,

Eva et al., 2019; Xu et al., 2020), allows us to better understand what promotes and why individuals engage in servant leadership.

Looking at the second and third research questions, studies 2 and 3 provide answers. The two research questions raise the issue of how the psychological processes between servant leadership and mental health are functioning. I will discuss the research findings in detail below, focusing on the leader (study 2) and on the employee (study 3). With focus on the leader, based on the TPWB (Barrick et al., 2013), experienced meaningfulness at work was proposed as a mediator between servant leadership and mental health outcomes. With focus on the employee, based on the SDT (Deci & Ryan, 2008a; Deci et al., 2001; Ryan & Deci, 2000a), the satisfaction of basic psychological needs was proposed as a mediator between servant leadership and mental health outcomes. For both proposed mediation models, indirect-only mediation was found in the respective samples, suggesting that the constructs studied are primary mediators, further mediators being unlikely (Zhao et al., 2010). In addition, this shows that servant leadership does not directly affect mental health of leaders and employees. Rather, with the TPWB and the SDT two theoretical frameworks could be identified, which explain the psychological processes behind the indirect relationship between servant leadership and mental health outcomes. While the SDT already explains the relationship between the satisfaction of needs and well-being, the TPWB was supplemented by the COR theory (Hobfoll, 1988, 1989; Hobfoll et al., 2018; Hobfoll & Shirom, 2000): Meaningfulness (at work) can be understood as an effective resource for the prevention of work stress (Glazer et al., 2014). Based on this, the stress-preventing and flourishing mediation effect of meaningfulness at work was argued. Theoretically, the COR perspective could even be extended to both mediation models: satisfaction of basic psychological needs for the employee focus and experienced meaningfulness at work for the leader focus. Although SDT describes the positive effects of autonomous motivation on eudaemonic well-being (Deci et al., 2001; Ryan et al., 2013; Ryan & Deci, 2001), it can also be assumed from the COR perspective that the satisfaction of basic psychological needs is a personal resource for employees. Similarly, meaningfulness at work is a resource for leaders (Glazer et al., 2014). Thus, the COR theory would serve as an overarching theoretical perspective for both employee and leader focus. But under which conditions do the mediation effects shown turn out high or low?

Regarding the leader focus and the associated TPWB, this question can only be answered from a theoretical perspective since no data on this specific question was collected in study 2. Derived from the TPWB, the question would be answered as follows: The mediation effect is high if the individual personality of the leader and the resulting motivational strivings, especially communion striving, which follows from agreeableness and emotional stability, are in line with the typical characteristics of servant leadership (Barrick et al., 2013; Greenleaf, 1977; Greenleaf & Spears, 2002; Liden et al., 2008; van Dierendonck, 2011). The lower the congruence between personality, resulting motivational strivings and the nature of servant leadership, the lower the positive effects on mental health might be. This suggests a theoretically grounded non-prescription rule because it would be expected that personalities with narcissistic traits could suffer negative consequences in the long term. Organizations should not prescribe servant leadership across the board but must ensure that servant leadership is implemented during an evolutionary change and that the respective leader's "fit" servant leadership in terms of their personality and motivational structure. Otherwise, adverse health effects at the leader level cannot be ruled out.

Regarding the employee focus, the question of individual boundary conditions can be empirically bolstered based on the results of study 4. The cognitive prototypes, namely employees' sensitivity and tyranny ILTs, played a central role in how high or low positive effects on mental outcomes were affected. Similar to the previous reasoning on the congruence between personality, motivational strivings and servant leadership at the leader level, the match or congruence between ILTs and servant leadership at the employee level was argued (Engle & Lord, 1997; J. G. Hunt et al., 1990). Based on the idea that the dimension sensitivity is conceptually close and tyranny distant from servant leadership, it was shown that the matching prototype (sensitivity ILT) strengthened the positive effects on mental health outcomes while conversely, the non-matching prototype (tyranny ILT) weakened the positive effects on mental health outcomes. Congruence, correspondence and fit are often used synonymously in literature (Tinsley, 2000). P-E fit, which is based on congruence between person and environment, is an important moderator in organizational psychology (ibid.). Although P-E fit was not explicitly considered in hypothesis development and research design, the basic idea of congruence is applicable to both leader and employee levels. For

reviews on congruence, especially in terms of P-E fit, refer to von Meir (1989), Spokane, Meir, and Catalano (2000) and Tinsley (2000). While congruence between actual leader behavior and employees' implicit leadership prototypes has not been empirically tested, it is important in terms of theoretical discourse to refer to congruence theory as an overarching theoretical perspective. Comparable to the COR theory, which offered a framework to explain the mediating effect of meaningfulness at work (leader level, based on TPWB) as well as of psychological need satisfaction (employee level, based on SDT), the congruence theory offers the possibility to explain the theoretically assumed moderator effect of personality and motivational strivings (leader level, based on TPWB) as well as the empirically shown moderator effect of ILTs (employee level, based on ILTs) equally. At leader level, the congruence between person (personality and motivational strivings) and environment (job characteristics of servant leadership) played an important role in increasing the experienced meaningfulness at work. While this can only be justified theoretically, this dissertation yielded empirical results at employee level. These results suggest that it is apparent both from a theoretical perspective of implicit leadership theories and from an empirical perspective that the congruence between person (sensitivity and tyranny ILTs) and environment (ideal type of servant leader) has a moderating effect on the relationship between servant leadership and psychological need satisfaction. The assumption that person and environment must be in harmony to function at best is substantiated by the theoretical arguments as well as empirical results of studies 2, 3 and 4. P-E fit seems to be an important boundary condition that can increase the already positive effects of servant leadership on mental health outcomes.

6.2 PRACTICAL IMPLICATIONS

As explained in the first chapter, the cases of mental illnesses in the workplace are on the rise (e.g., Grobe et al., 2019; Knieps & Pfaff, 2019; Marschall et al., 2020, 2017). In addition to the fact that mental illnesses have a far-reaching impact on the lives of those affected, it is well known that there are also psychosomatic illnesses that threaten physical health. The problem of rising mental illness extends beyond the fates of those affected, so that broader effects on economic per-

formance can also be assumed. Since I have studied with this thesis how and when (servant) leadership affects mental health in the workplace, an overarching discussion of the practical implications, in terms of a practical contribution of this thesis, is obligatory. In this discussion, I will outline various aspects, namely personnel selection and development, organizational development, and workplace health management. In the overall view of the four empirical studies, it was striking that congruence emerged as an overarching concept. In the sense of congruence or fit theories, it is important that “things fit together” (e.g., Caplan & Harrison, 1993; Edwards et al., 1998; Kristof-Brown et al., 2005; Spokane et al., 2000; Tinsley, 2000; Van Harrison, 1978). If you approach the organization from the outside in (outside-in perspective), the order of “things” that must fit is as follows:

1. The leadership theory should fit the organization (organizational development and occupational health management).
2. The leaders should fit the leadership theory (personnel selection).
3. The employees should fit the leadership behavior (personnel selection and development).

I incorporate this central idea of congruence into the different areas mentioned above and show which practical implications result from the studies conducted in this dissertation.

Organizational development. Initial research results indicate that the (ethical) organizational climate (S. D. Hunt, van Wood, & Chonko, 1989) had a moderating effect on the relationship between agreeableness (personality dimension in the leader) and servant leadership, so that the effect was strengthened in case of high ethical climate and weakened in case of low ethical climate (Brouns, 2019; Brouns & Externbrink, 2018). It follows that a leadership theory should fit the organization, especially the climate and culture. Using the example of servant leadership, it has been shown that people who otherwise show typical antecedents of servant leadership (e.g., agreeableness, see Hunter et al., 2013) show less servant leadership behavior when faced with a low ethical organizational climate (Brouns, 2019;

Brouns & Externbrink, 2018). This shows how important it is for an organization to develop into a “servant organization” that fits servant leadership theory. Failure to do so can attenuate such behavior in those who are naturally inclined towards servant leadership behavior.

Occupational health management. The results of study 4 may have implications on the areas of organizational development and occupational health management. Difficulties and slowdowns are to be expected if the organizational and leadership culture is to be shifted in the direction of servant leadership. Through a cognitive alignment, employees who previously had tyrannical leaders will expect tyrannical leaders in the future (Engle & Lord, 1997). This expectation, which is at odds with servant leadership, could result in organizational development and occupational health management interventions failing. As a result, positive effects of servant leadership on employee health could be reduced. The following aspects are therefore critical success factors for a change in the leadership paradigm to servant leadership: both extensive communication campaigns so that employees know what is approaching them and a slow pace of change, because the ILTs of the employees cannot be shifted like a switch but adapt to each other in a mutual exchange process between leader and employee.

Personnel selection and development. Once the organization, through organizational development, has established an ethical climate and the organizational ecosystem fits, e.g., to servant leadership, then a second important criterion for a mentally healthy workforce is that the leader’s stable traits, fit the desired leadership theory. Candidates who are not narcissistic and who in addition show deep compassionate love for non-intimate others seem to be particularly apt to engage in servant leadership according to the empirical findings of study 1 (Brouns et al., 2020; S. J. Peterson et al., 2012). Furthermore, study 2 could show that, from the perspective of the TPWB (Barrick et al., 2013), especially agreeable and emotionally stable persons strive for communion and thus experience meaningfulness at work when they act as servant leaders. As a result, their emotional exhaustion was reduced, and their flourishing promoted. In line with other precursors investigated to date (e.g., Eva et al., 2019; Xu et al., 2020), these characteristics should form the basis for the selection of future leaders. In this dissertation compassion-

ate love for non-intimate others was an antecedent with medium to high effect size. Therefore, I refer here to the SCBCS as an efficient short scale for measuring compassionate love for non-intimate others, which could be used as a form of screening instrument in the personnel selection process (Hwang et al., 2008). Furthermore, it is advisable to perform a five-factor personality test (e.g., Costa & McCrae, 1992; McCrae & John, 1992) to see how pronounced agreeableness and emotional stability are. These factors determine, following the TPWB, the striving for communion (Barrick et al., 2013), which is conceptually in line with the idea of servant leadership. Thus, not only are individuals who score high on agreeableness and emotional stability are more likely to show servant leadership behavior (Brouns, 2019; Brouns & Externbrink, 2018; Hunter et al., 2013), but they are even more likely to experience meaningfulness in their actions, which ensures that they are provided with the necessary resources to mitigate stress and promote well-being. This underscores why congruence or fit is of great relevance in the selection of the “right” leaders. Although leadership development is a critical component of OHP and empirical evidence shows that leadership training has a positive impact on employee health (Kelloway & Barling, 2010), a person whose personality and motivation are not congruent with the core of servant leadership cannot be “made” to be a servant leader (non-prescription rule). If this were attempted, the training would potentially result in that person showing servant leadership behavior and being able to promote employee health, however, in so doing, would most likely be emotionally taxing for the individual. Thus, engaging in servant leadership behaviors would not be associated with an increase in personal resources, through experienced meaningfulness at work, but would rather deprive the persons resources (Hobfoll, 1989).

Regarding the congruence between the employees’ ILTs and the real leadership behavior of the respective leader, it can be stated that there is an impact on the relationship between (servant) leadership and mental health outcomes. If the ILTs are congruent with the leadership behavior, the positive impact on mental health outcomes is strengthened, although even anti-prototype ILTs did not lead to servant leadership having a negative impact on mental health outcomes. The effect size of the mediation was only weakened. These are particularly helpful findings for practice: Congruence between ILTs and leadership behavior leads to an increased positive effect on mental health; incongruence leads to a weakened

positive effect but not to a negative effect. A second positive message for practice is that in a high-quality LMX relationship ILTs and leadership behavior converge through social exchange and social learning (Engle & Lord, 1997). This means that congruence can be achieved through socialization processes. Since implicit leadership theories are considered changeable, no diagnostic procedures are required in recruiting to test ILTs. While ILTs arise, among other things, from individual learning experiences (Keller, 1999), this would rather be discrimination of persons based on their individual experiences. Therefore, the practical recommendation is that leaders should always strive to establish a high-quality LMX relationship in order to change the cognitive structures of employees with regard to prototypical leadership behavior via social learning experiences (Bandura, 1977b).

In summary, this thesis showed which individual traits must be looked at to find potential servant leaders. It was also shown that servant leadership at leader and employee level led to positive mental health outcomes, i.e., reduced emotional exhaustion and increased flourishing. Keeping the boundary conditions in mind, I can recommend cultivating servant leadership for health protection in organizations. The crucial role of congruence, e.g., between organizational climate and leadership theory, as well as between leadership theory and individual traits and motivational strivings of the leader, was discussed extensively in the previous section. Even though servant leadership has shown positive outcomes in terms of OHP, I would like to encourage appropriate psychological diagnostics.

6.3 LIMITATIONS AND FUTURE RESEARCH

Scientific studies always have limitations. In the following, it will be discussed on an overarching level what limitations, but equally which paths for future research this thesis offers.

Regarding all four dedicated limitations and future research sections of the respective studies, it is noticeable that mainly limitations which are related to the study design and the method were discussed. The study design is the core of each empirical study. One of the main limitations of the conducted studies, except for study 3, is the use of a cross-sectional design. A major limitation of this design is that it does not allow causal inferences from the data (Taris & Kompier, 2014). The

causality solely adheres to the underlying theory. The common method bias (Podsakoff et al., 2003) is more probable in cross-sectional studies due to the absence of a time lag in the collection of the different constructs. Study 1 has to some extent overcome the limitations mentioned above by the dyadic design and the assumed temporal stability of the independent variables investigated (del Rosario & White, 2005; Kamble et al., 2010; Sprecher & Fehr, 2005; Virat et al., 2020). Study 2, which also analyzed the data obtained in study 1, only considered variables that were rated by the leader. Thus, the advantage of the dyadic design and the resulting reduced common source bias was lost (Podsakoff et al., 2003). Study 3 had the most sophisticated research design by implementing short time lags between the collection of the different constructs (Dormann & Griffin, 2015; van Dierendonck et al., 2004). This type of survey required more effort to motivate the study participants to attend all three measurement points. This was finally reflected in the sample size ($n = 106$). Since CFI and TLI are particularly sensitive to sample size, I assume that CFI and TLI, compared to RMSEA, undercut the limits due to the rather small sample size (Sivo et al., 2006). Therefore, it was beneficial for the contribution of this dissertation that the model and its results could be replicated and complemented on a larger sample in study 4. No fit issues occurred in the evaluation of the measurement model, which led me to the conclusion that the fit issues in study 3 were caused merely by sample size, since the same psychometric scales were used. At the same time study 4 addressed a limitation of study 3, namely the lack of consideration of individual boundary conditions. Any methodological limitation of the research design results in potential for future research. Regarding the detailed questions of the individual studies, refer to the respective discussion chapters of the studies. Even if the method is always based on the question to be answered, it should be called upon to conduct less cross-sectional and more longitudinal studies. In leadership research, it should be pointed out that overly long time lags (e.g., months or years) are not conducive to studying the consequences of the dynamic phenomenon of leadership; rather, shortitudinal time lags of days or weeks are preferable (Dormann & Griffin, 2015; van Dierendonck et al., 2004). In the intersection between leadership and OHP, dynamic perspectives, as captured by diary studies, also called experience sampling (Csikszentmihalyi & Larson, 2014; Csikszentmihalyi et al., 1977; Larson & Csikszentmihalyi, 2014), can be particularly valuable, since leadership as well as

emotional exhaustion and flourishing are volatile psychological phenomena that can change in the short term. Examples of this can also be found in literature (Liao et al., 2020; Rivkin et al., 2014, 2016). The more sophisticated the research design, the more robust the results, but at the same time the more complex the implementation. Therefore, it must be weighed up which research design is appropriate for answering the underlying question.

This thesis has shown that servant leadership has a positive influence on both leader and employee level mental health outcomes, such as emotional exhaustion and flourishing. Although this thesis has provided theoretically sound reasons why servant leadership is particularly suited to positively influence mental health outcomes, future studies should control for other leadership theories. For example, other leadership theories may be transformational, authentic, ethical, and respectful leadership (e.g., Bass & Riggio, 2006; van Quaquebeke & Eckloff, 2010; Walumbwa et al., 2008; Zhu, May, & Avolio, 2004). In this approach it can be investigated which leadership theory has the highest contribution to the mental health of employees and leaders. Therefore, future studies should include other leadership theories as control variables to perform these analyses. In addition to the question of which leadership theory is “best” suited to promote mental health, the question is if there is a conceptual overlap between the leadership theories that has the potential to promote mental health? All the above leadership theories include relationship-oriented leader behavior (DeRue, Nahrgang, Wellman, & Humphrey, 2011; Wegge, Shemla, & Haslam, 2014), which in particular enhances LMX quality. It has already been shown that a high-quality LMX relationship has the potential to satisfy basic psychological needs (Graves & Luciano, 2010, 2013). As such, the relationship-oriented core of positive leadership theories could be a unifying component of the different theories. Positively influencing LMX quality, which in turn satiates basic psychological needs, would mark a key psychological mechanism that fosters well-being.

Especially regarding the psychological process at employee level, a more nuanced view could be valuable in future studies. For example, the view of overall basic need satisfaction taken in study 3 could be broken down into the three psychological basic needs for autonomy, competence, and relatedness and analyzed at the dimensional level. Are any of the psychological basic needs particularly promoted by servant leadership? Does one of the psychological basic needs

particularly promote emotional exhaustion or flourishing? A granulation of the perspective could also be applied to the servant leadership construct, so that it is not considered on an overall composite scale, but also on a dimensional level. Which dimensions of servant leadership promote which basic psychological needs? This question brings us closer to the answer to which components of servant leadership are responsible for the health-promoting effect. In order not to face the complexity of an 8-dimensional servant leadership construct (van Dierendonck, 2011; van Dierendonck & Nuijten, 2011), Sousa and van Dierendonck (2017) have aggregated key dimensions of servant leadership into two meta-factors, the humble side (humility, standing back) and the action side (empowerment, stewardship, accountability) of servant leadership. This view of servant leadership can provide a more detailed view of the underlying processes.

Studies 2-4, which all included mediation analyses, showed the pattern of indirect-only mediation (Zhao et al., 2010). As already noted in the discussions of the respective studies, further secondary mediators should not be excluded despite the indirect-only mediations found. If further psychological processes, derived from theory, are indicated, it should be encouraged to test these processes empirically too. This allows us to conclude on an evidence-based approach, whether a psychological process is applicable or not to the relationship between servant leadership and mental health outcomes. While I am convinced by the theoretical argumentation and empirical results of the studies that both TPWB (Barrick et al., 2013) and SDT (e.g., Deci & Ryan, 2000; Ryan & Deci, 2000a) mark a central process between (servant) leadership and mental health, future research should further investigate the mediators of this relationship. Through cumulative evidence, it is possible to determine with increasing certainty how this relationship works under the surface.

Based on the current state of research, more complex and more complete models could be developed in future studies. An example, derived from the results of this work, would be to extend the model from study 2 by antecedent's agreeableness and emotional stability as well as motivational strivings. In this way, the underlying theory would have been more fully represented in the research model. The TPWB postulates that personality traits determine motivational strivings, which in turn should be in line with the individual's behavior, in this case servant leadership, so that meaningfulness is experienced through work

(Barrick et al., 2013). In study 2, I argued that agreeableness and emotional stability are already researched antecedents of servant leadership (Brouns, 2019; Brouns & Externbrink, 2018; Hunter et al., 2013) and therefore it is to be assumed that agreeable and emotionally stable personalities who primarily strive for communion show servant leadership behavior, which consequently leads to meaningfulness at work, since communion striving and servant leadership are concordant. This theoretical reasoning could be empirically tested in future studies, in an integrated model. The model could, in brief, appear as follows: personality traits (agreeableness, emotional stability) → motivational strivings (communion striving) → experienced meaningfulness → health outcomes (e.g., emotional exhaustion and flourishing). This model with multiple mediators would represent the underlying theory more accurately in empirical terms than, for example, the previous model of study 2. However, it must also be considered that more complex models, containing more constructs and therefore more free parameters, require larger samples to be analyzed by SEM (Davcik, 2014).

Furthermore, I demonstrated that not every antecedent of servant leadership explains unique variance, but that there can be conceptual overlaps between two or more competing antecedents. In the first study this observation was made for narcissism and compassionate love (refer to the results and discussion of study 1). In future studies, a stronger focus on this redundancy of antecedents could be placed, so that a study could be conducted that examines all antecedents included in the nomological network of servant leadership (Eva et al., 2019; Xu et al., 2020) and examines their incremental contribution to the servant leadership construct. Following the question, which antecedents most precisely determine a servant leader, this comparative analysis of all known antecedents would enrich research and practice: Such a study would reveal hidden conceptual overlaps between antecedents from a theoretical perspective and also provide the most accurate and efficient constructs that need to be psychometrically assessed to make a valid personnel selection. When it comes to recruiting new leaders as potential servant leaders, a holistic perspective will improve the quality of diagnostics.

Study 4 could show that it is valuable to integrate boundary conditions into a research model. Therefore, I can further encourage future research to consider boundary conditions on different levels (individual, team, organization) when

designing future studies in the intersection of leadership and OHP. This will help to better understand when certain leadership theories have more or less positive/negative effects on (mental) health. This, in turn, makes it possible to consider such boundary conditions in practice, e.g., in the design of work environments.

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APPENDIX

A1: Scales Used in Study 1

Narcissism measured with the German Narcissistic Personality Inventory-13 (G-NPI-13; Brailovskaia et al., 2017):

1. Ich habe gern Autorität über andere.
2. Macht ist mir sehr wichtig.
3. Meine Führungsrolle scheint immer anerkannt zu werden.
4. Ich besitze von Natur aus die Fähigkeit, andere zu führen.
5. Ich weiß, dass ich jemand bin, weil mir das alle sagen.
6. Ich stelle meinen Körper gern zur Schau.
7. Ich schaue meinen Körper gern an.
8. Wenn sich die Gelegenheit ergibt, gebe ich schon mal an.
9. Ich schaue mich gern im Spiegel an.
10. Mir fällt es leicht, Menschen zu manipulieren.
11. Ich bestehe darauf, dass mir gebührende Achtung entgegengebracht wird.
12. Ich erwarte viel von anderen Leuten.
13. Ich werde nie zufrieden sein, bis ich alles bekomme, was mir zusteht.

Compassionate love measured with the back-translated version of the Santa Clara Brief Compassion Scale (SCBCS; Hwang et al., 2008):

1. Wenn ich von jemandem (einem Fremden) höre, der durch eine schwere Zeit geht, habe ich großes Mitgefühl für diese Person.
2. Ich tendiere dazu Mitgefühl für Menschen zu zeigen, auch wenn ich sie nicht kenne.
3. Eines der Dinge, die mein Leben besonders bedeutsam machen, ist anderen in der Welt zu helfen, die Hilfe benötigen.
4. Ich würde mich lieber an Handlungen beteiligen, die anderen weiterhelfen, auch Fremden, als an solchen, die mir selbst weiterhelfen.

5. Ich habe oft Mitgefühl gegenüber Menschen (Fremden), wenn sie in Not zu sein scheinen.

Religious quest orientation measured with the back-translated version of the New Indices of Religious Orientation (NIRO; Francis, 2007):

1. Ich wurde dazu angestoßen, religiöse Fragen zu stellen, weil ich mir der Spannungen in meiner Welt mehr und mehr bewusst wurde.
2. Meine Lebenserfahrungen haben mich dazu gebracht, meine religiösen Überzeugungen zu überdenken.
3. Ich zeige Wertschätzung für meine religiösen Zweifel und Unsicherheiten.
4. Für mich ist das Zweifeln ein wichtiger Teil dessen, was es heißt, religiös zu sein.
5. Wenn ich wachse und mich verändere, erwarte ich, dass meine Religion auch wächst und sich verändert.
6. Ich hinterfrage ständig meine religiösen Überzeugungen.

Servant leadership measured with the German version of the Servant Leadership Survey (SLS; Verdorfer & Peus, 2014):

1. Mein Vorgesetzter stellt mir die Informationen zur Verfügung, die ich brauche um meine Arbeit gut zu machen.
2. Mein Vorgesetzter ermutigt mich, meine Talente zu nutzen.
3. Mein Vorgesetzter hilft mir dabei, mich weiterzuentwickeln.
4. Mein Vorgesetzter ermutigt seine Mitarbeiter zu neuen Ideen.
5. Mein Vorgesetzter lässt mir Raum, Entscheidungen zu treffen, die meine Arbeit erleichtern.
6. Mein Vorgesetzter ermöglicht mir Probleme selbstständig zu lösen, anstatt mir einfach zu sagen, was zu tun ist.
7. Mein Vorgesetzter gibt mir reichlich Gelegenheit, neue Fähigkeiten zu erlernen.
8. Mein Vorgesetzter hält sich lieber im Hintergrund und überlässt es anderen, für die Arbeit gelobt zu werden.

9. Mein Vorgesetzter ist nicht auf Anerkennung oder Belohnung aus, wenn er etwas für andere tut.
10. Mein Vorgesetzter scheint sich über den Erfolg von Kollegen mehr zu freuen als über seinen eigenen.
11. Mein Vorgesetzter macht mich für die Aufgaben, die ich ausführe, verantwortlich.
12. Für meine Leistungen bin ich vor meinem Vorgesetzten verantwortlich.
13. Mein Vorgesetzter macht mich und meine Kollegen dafür verantwortlich, wie wir unsere Aufgaben erledigen.
14. Mitarbeiter, die bei ihrer Arbeit Fehler gemacht haben, werden von meinem Vorgesetzten noch lange kritisiert. (-)
15. Mein Vorgesetzter bleibt hart gegenüber Leuten, die ihn bei der Arbeit verärgert haben. (-)
16. Meinem Vorgesetzten fällt es schwer, vergangene Fehler zu vergeben. (-)
17. Mein Vorgesetzter geht auch dann Risiken ein, wenn er sich nicht sicher ist, ob er von seinem Vorgesetzten Unterstützung erhalten wird.
18. Mein Vorgesetzter geht Risiken ein und tut das was in seinen Augen getan werden muss.
19. Mein Vorgesetzter geht offen mit seinen Grenzen und Schwächen um.
20. Mein Vorgesetzter ist oft von Dingen berührt, die in seinem Umfeld passieren.
21. Mein Vorgesetzter ist bereit, seine Gefühle auch dann zu zeigen, wenn dies unerwünschte Folgen hat.
22. Mein Vorgesetzter teilt seinen Mitarbeitern seine Gefühle offen mit.
23. Mein Vorgesetzter lernt aus Kritik.
24. Mein Vorgesetzter versucht aus der Kritik seines Vorgesetzten zu lernen.
25. Mein Vorgesetzter gesteht Fehler gegenüber seinem Vorgesetzten ein.
26. Mein Vorgesetzter lernt aus den unterschiedlichen Ansichten und Meinungen anderer.
27. Wenn jemand Kritik übt, versucht mein Vorgesetzter, daraus zu lernen.
28. Mein Vorgesetzter hebt immer wieder die Wichtigkeit hervor, das Wohl der Allgemeinheit im Blick zu haben.
29. Mein Vorgesetzter hat eine langfristige Vision.

30. Mein Vorgesetzter betont immer wieder die gesellschaftliche Verantwortung unserer Arbeit.

A2: Scales Used in Study 2

Emotional exhaustion measured with the German Maslach Burnout Inventory (MBI; Büssing & Perrar, 1992):

1. Ich fühle mich durch meine Arbeit ausgebrannt.
2. Der direkte Kontakt mit Menschen bei meiner Arbeit belastet mich.
3. Den ganzen Tag mit Menschen zu arbeiten, ist für mich wirklich anstrengend.
4. Ich fühle mich durch meine Arbeit emotional erschöpft.
5. Am Ende eines Arbeitstages fühle ich mich verbraucht.
6. Ich fühle mich wieder müde, wenn ich morgens aufstehe und den nächsten Arbeitstag vor mir habe.
7. Ich habe das Gefühl, dass ich an meinem Arbeitsplatz zu hart arbeite.
8. Ich fühle mich durch meine Arbeit frustriert.

Flourishing measured with the back-translated version of the Flourishing Scale (Diener et al., 2010):

1. Ich führe ein zielbewusstes und sinnerfülltes Leben.
2. Meine sozialen Beziehungen sind unterstützend und bereichernd.
3. Meine täglichen Aktivitäten beschäftigen und interessieren mich.
4. Ich trage aktiv zum Glück und Wohlergehen anderer bei.
5. Ich bin kompetent und leistungsfähig in den Aktivitäten, die mir wichtig sind.
6. Ich bin ein guter Mensch und lebe ein gutes Leben.
7. Ich bin optimistisch für meine Zukunft.
8. Leute respektieren mich.

Work meaningfulness measured with the back-translated version of the Work Meaningfulness Scale (Bunderson & Thompson, 2009):

1. Die Arbeit, die ich mache, ist wichtig.
2. Ich habe eine bedeutungsvolle Arbeit.
3. Die Arbeit, die ich mache, macht die Welt zu einem besseren Ort.
4. Meine Arbeitsaktivitäten machen einen Unterschied in der Welt.
5. Die Arbeit, die ich mache, ist sinnvoll bzw. bedeutungsvoll.

Servant leadership measured with the back-translated version of the Essential Servant Leadership Behaviors (ESLB; Winston & Fields, 2015):

Meine direkte Führungskraft...

1. lässt seinen/ihren Worten Taten folgen.
2. dient Menschen, unabhängig von ihrer Nationalität, ihrem Geschlecht oder ihrer Rasse.
3. sieht Dienen als Mission und Verantwortung gegenüber anderen Menschen an.
4. ist aufrichtig an seinen/ihren Mitarbeitern, als Mensch, interessiert.
5. versteht, dass es das wichtigste ist anderen zu dienen.
6. ist gewillt Opfer zu bringen, um anderen zu helfen.
7. versucht eher Vertrauen zu schaffen als Angst und Unsicherheit zu verbreiten.
8. ist immer ehrlich.
9. wird von einem Sinn für eine höhere Berufung angetrieben.
10. fördert Werte, die über Selbstinteresse und materiellen Erfolg hinaus gehen.

A3: Scales Used in Study 3

Emotional exhaustion measured with the German Maslach Burnout Inventory (MBI; Büssing & Perrar, 1992):

9. Ich fühle mich durch meine Arbeit ausgebrannt.
10. Der direkte Kontakt mit Menschen bei meiner Arbeit belastet mich.
11. Den ganzen Tag mit Menschen zu arbeiten, ist für mich wirklich anstrengend.
12. Ich fühle mich durch meine Arbeit emotional erschöpft.
13. Am Ende eines Arbeitstages fühle ich mich verbraucht.
14. Ich fühle mich wieder müde, wenn ich morgens aufstehe und den nächsten Arbeitstag vor mir habe.
15. Ich habe das Gefühl, dass ich an meinem Arbeitsplatz zu hart arbeite.
16. Ich fühle mich durch meine Arbeit frustriert.

Flourishing measured with the back-translated version of the Flourishing Scale (Diener et al., 2010):

9. Ich führe ein zielbewusstes und sinnerfülltes Leben.
10. Meine sozialen Beziehungen sind unterstützend und bereichernd.
11. Meine täglichen Aktivitäten beschäftigen und interessieren mich.
12. Ich trage aktiv zum Glück und Wohlergehen anderer bei.
13. Ich bin kompetent und leistungsfähig in den Aktivitäten, die mir wichtig sind.
14. Ich bin ein guter Mensch und lebe ein gutes Leben.
15. Ich bin optimistisch für meine Zukunft.
16. Leute respektieren mich.

Servant leadership measured with the German version of the Servant Leadership Survey (SLS; Verdorfer & Peus, 2014):

1. Mein Vorgesetzter stellt mir die Informationen zur Verfügung, die ich brauche um meine Arbeit gut zu machen.
2. Mein Vorgesetzter ermutigt mich, meine Talente zu nutzen.
3. Mein Vorgesetzter hilft mir dabei, mich weiterzuentwickeln.
4. Mein Vorgesetzter ermutigt seine Mitarbeiter zu neuen Ideen.
5. Mein Vorgesetzter lässt mir Raum, Entscheidungen zu treffen, die meine Arbeit erleichtern.
6. Mein Vorgesetzter ermöglicht mir Probleme selbstständig zu lösen, anstatt mir einfach zu sagen, was zu tun ist.
7. Mein Vorgesetzter gibt mir reichlich Gelegenheit, neue Fähigkeiten zu erlernen.
8. Mein Vorgesetzter hält sich lieber im Hintergrund und überlässt es anderen, für die Arbeit gelobt zu werden.
9. Mein Vorgesetzter ist nicht auf Anerkennung oder Belohnung aus, wenn er etwas für andere tut.
10. Mein Vorgesetzter scheint sich über den Erfolg von Kollegen mehr zu freuen als über seinen eigenen.
11. Mein Vorgesetzter macht mich für die Aufgaben, die ich ausführe, verantwortlich.
12. Für meine Leistungen bin ich vor meinem Vorgesetzten verantwortlich.
13. Mein Vorgesetzter macht mich und meine Kollegen dafür verantwortlich, wie wir unsere Aufgaben erledigen.
14. Mitarbeiter, die bei ihrer Arbeit Fehler gemacht haben, werden von meinem Vorgesetzten noch lange kritisiert. (-)
15. Mein Vorgesetzter bleibt hart gegenüber Leuten, die ihn bei der Arbeit verärgert haben. (-)
16. Meinem Vorgesetzten fällt es schwer, vergangene Fehler zu vergeben. (-)
17. Mein Vorgesetzter geht auch dann Risiken ein, wenn er sich nicht sicher ist, ob er von seinem Vorgesetzten Unterstützung erhalten wird.
18. Mein Vorgesetzter geht Risiken ein und tut das was in seinen Augen getan werden muss.
19. Mein Vorgesetzter geht offen mit seinen Grenzen und Schwächen um.
20. Mein Vorgesetzter ist oft von Dingen berührt, die in seinem Umfeld passieren.

21. Mein Vorgesetzter ist bereit, seine Gefühle auch dann zu zeigen, wenn dies unerwünschte Folgen hat.
22. Mein Vorgesetzter teilt seinen Mitarbeitern seine Gefühle offen mit.
23. Mein Vorgesetzter lernt aus Kritik.
24. Mein Vorgesetzter versucht aus der Kritik seines Vorgesetzten zu lernen.
25. Mein Vorgesetzter gesteht Fehler gegenüber seinem Vorgesetzten ein.
26. Mein Vorgesetzter lernt aus den unterschiedlichen Ansichten und Meinungen anderer.
27. Wenn jemand Kritik übt, versucht mein Vorgesetzter, daraus zu lernen.
28. Mein Vorgesetzter hebt immer wieder die Wichtigkeit hervor, das Wohl der Allgemeinheit im Blick zu haben.
29. Mein Vorgesetzter hat eine langfristige Vision.
30. Mein Vorgesetzter betont immer wieder die gesellschaftliche Verantwortung unserer Arbeit.

Satisfaction of basic psychological needs measured with the back-translated version of the Work-related Basic Need Satisfaction Scale (W-BNS; van den Broeck et al., 2010):

1. Ich fühle mich so, als könnte ich bei meinem Job ich selbst sein.
2. Bei der Arbeit fühle ich mich oft so, als müsste ich den Befehlen anderer Leute folgen. (-)
3. Wenn ich wählen könnte, würde ich die Arbeit anders machen. (-)
4. Die Aufgaben, die ich bei der Arbeit erledigen muss, entsprechen dem, was ich wirklich tun möchte.
5. Ich fühle mich frei, meine Arbeit so zu erledigen, wie ich es für sinnvoll erachte.
6. In meinem Job fühle ich mich gezwungen, Dinge zu tun, die ich nicht tun möchte. (-)
7. Ich bin wirklich dazu in der Lage, meine Aufgaben am Arbeitsplatz zu meistern.
8. Ich fühle mich kompetent in meinem Job.
9. Ich bin gut in dem, was ich in meinem Job mache.

-
10. Ich habe das Gefühl, dass ich auch die schwierigsten Aufgaben auf der Arbeit erledigen kann.
 11. Ich fühle mich bei meinem Job nicht wirklich mit anderen Leuten verbunden. (-)
 12. Bei der Arbeit fühle ich mich als Teil einer Gruppe.
 13. Ich mische mich auf der Arbeit nicht wirklich unter die Leute. (-)
 14. Bei der Arbeit kann ich mit Leuten über Dinge sprechen, die mir wirklich wichtig sind.
 15. Ich fühle mich oft alleine, wenn ich mit meinen Kollegen zusammen bin. (-)
 16. Einige Leute, mit denen ich arbeite, sind enge Freunde von mir.

A4: Scales Used in Study 4

The same scales were used as in Study 3. To avoid redundancy, these scales are not presented again. One additional scale was used in study 4:

Implicit leadership theories (sensitivity & tyranny) measured with the back-translated version of the Implicit Leadership Theories Inventory (Epitropaki & Martin, 2004):

Wenn Sie im Allgemeinen an eine Führungskraft denken, wie gut charakterisieren dann die folgenden Eigenschaften eine typische Führungskraft?

(sensitivity dimension of ILTs)

1. Hilfsbereit
2. Verständnisvoll
3. Aufrichtig

(tyranny dimension of ILTs)

1. Dominierend
2. Penetrant
3. Manipulativ
4. Laut
5. Eingebildet
6. Egoistisch

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