Psychological safety and leadership

Psychological safety as a mediator in the connection between leadership styles

and organizational outputs

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Abstract

Background: There has been growing interest in the concept of psychological safety in the previous 25 years. Psychological safety has been studied in relation to both leadership and organizational outputs. Despite the focus it has received, no previous reviews have explored the relationship between leadership, psychological safety and organizational outputs.

Objective: To explore the connection between studied leadership styles and psychological safety in relation to organizational outputs by reviewing the research exploring this connection.

Method: This study conducts a systematic literature review, using the PRISMA 2020 checklist. The systematic review is conducted through Aalborg University's Database PRIMO. 214 were initially identified. After checking for duplicates as well as excluding articles which did not fit the scope, 12 articles remained. After completing a Risk of Bias assessment, one additional article was excluded. The final number of articles in the review was 11 (n=11).

Results: The studies assessed the impact of 8 different leadership styles, each finding a positive effect on different organizational outputs. The relationship between ethical, humble, inclusive spiritual and servant leadership and organizational output was partially mediated by psychological safety. The relationship between transformational, ambidextrous and paradoxical leadership and organizational output was partially mediated by psychological safety.

Discussion: Characteristics of the leadership styles reviewed were qualitatively evaluated to determine the specific leadership qualities hypothesized to promote psychological safety and, thusly, organizational output. This analysis revealed six leadership qualities that were hypothesized to foster psychological safety. A new leadership style termed Psychological Safety Leadership was proposed.

Conclusion: Given that a positive relationship between the presented leadership styles and their organizational outputs was found, and that this relationship was in all instances either partially or fully mediated by psychological safety the hypothesis is supported.

Indholdsfortegnelse

1.0. Introduction

1.1. Context

Monday morning at the weekly team meeting and team leader Henry introduces the work schedule. He is met by a comment from team member Jes saying in a small but clearly disappointed voice "It feels like we are never included in the decisions made on behalf of this team". Henry has an impulse to fight this comment with the logical argument that he can't possibly bounce all ideas off everyone in the team, and that this decision was made during the weekend when the team was off work. However, he chooses to reply instead with "Thanks for speaking up about this Jes. It seems like an important thing to discuss. Let's have a chat about it after we move through the agenda". Without knowing it, Henry just took a step in the direction of fostering psychological safety in his team and creating a space where their thoughts are welcomed and considered.

Psychological safety is a term used widely in the corporate world, as if it were a commodity sought after by all organizations. This is also evident in the research literature where you can observe many theories and studies examining the topic and why it is important to organizations. According to data from APA PsycNet, the number of scholarly articles published on the concept of psychological safety increased significantly between the year 2000 to the year 2024 from 36 articles to 1,377 articles respectively (APA PsycNet, 2025). This spike in popularization can partly be attributed to the psychologist Amy Edmondson, who introduced the term Team Psychological Safety in 1999 (Edmondson, 1999). Later, in her book *Fearless Organizations* she describes psychological safety in the workplace as a state where people feel comfortable expressing mistakes or concerns, without fearing embarrassment or punishment (Edmondson, 2020, p. 20). The successful fate of psychological safety as an organizational layman-term was sealed in 2016 when Charles Duhigg published the article "*What Google Learned from Its Quest to Build the Perfect Team*" – a discussion article that covered the findings of a study conducted at Google which found that psychological safety was the strongest predictor of success in a team (Duhigg, 2016). Since then, the concept has been applied across various fields, including within education, healthcare, and leadership

development, emphasizing its importance in creating inclusive and high-performing environments.

Looking back at the introduction of the free market in 1776 by Adam Smith, the primary objective of most organizations and businesses has been to maximize profit and minimize costs, thereby fostering economic growth and satisfying shareholders (Braverman, 1974). However, over time, the emphasis on financial growth and revenue generation has often come at the expense of other important organizational domains—namely, the well-being of the individuals who sustain these enterprises. This issue was first addressed in the 1930s through Human Relations studies, which explored the benefits of cultivating a work environment that also prioritizes worker well-being. Later it was expanded upon by Neo-Human Relations theory, which examined the role of organizational culture and employee motivation in enhancing both individual well-being and productivity (Hollway, 1991; Herzberg, 1999).

In recent decades, particularly since the late 1990s, there has been an increasing emphasis on the psychological well-being of employees, with a growing body of research on the concept of psychological safety. The purpose of this study is to assess the literature on psychological safety and evaluate how it relates to leadership behavior and organizational outputs. The goal is to gather "best practices" about the concept and how leaders play a role in fostering a work culture that builds on its concepts. Furthermore, this thesis aims to highlight why leaders should want to cultivate a work culture where psychological safety is present, based on its impact on organizational outputs. It is hoped that this topic could help leaders examine the ways in which they already make use of the concept and how they could more consciously promote psychological safety through their leadership behavior. Lastly, having established that the concept of psychological safety has curved in the past 20 years, it is important to assess whether the trending use of and reference to psychological safety is supported by research of its effect (Petticrew & Roberts, 2006, p. 16).

1.2. Purpose and research question

This study springs from a curiosity about psychological safety and its role in different organizational processes. As described in the introduction, the research around

psychological safety has grown immensely in the last two decades. However, the link between psychological safety in leadership and its impact on organizations remains an area less explored. A search on PRIMO and Google Scholar (as of October 2024) revealed examination and systematic reviews of leadership and psychological safety as well as leadership and organizational outcomes (Li, Ling & Zhu, 2024; Forte, Silva, Cunha & Silva, 2024), however no systematic reviews have explored how these concepts are interlinked and what this means for the organization. The quick rise in the popularity of psychological safety and the concurrent lack of overview drives the research question:

What is the connection between certain leadership styles and psychological safety in relation to organizational outputs according to research?

This is examined through a systematic review to assess what research exists around the effects of psychological safety in organizations. The goal of the study is to gain an overview of the outcomes of a psychological safe organizational culture and better understand what part a leader plays in this process, why another keyword introduced in the review is leadership. The aim is to evaluate what research thus far has explored the role of psychological safety to be, in connection with different leadership styles, and how this affects the organization and the organizational outputs. This question will be answered through a systematic literature review following the PRISMA (2020) guidelines, a synthesizing of the research on the field followed by a discussion of the results.

1.3. Demarcation

Firstly, it is important to note that this thesis will deal with psychological safety in relation to different leadership styles and not as a concept in and of itself. This demarcation is necessary to sensitize the research area and get a thorough understanding of the different aspects of the concept. Psychological safety has been examined in relation to many organizational processes and on many levels of the organizations, therefore leadership is chosen to narrow the search. According to Nembhard & Edmondson (2006) people with high status within the organization – such as a leader – are less concerned about expressing their opinions and

conveying their needs. A leader's behavior affects their team's behavior through role modeling and team members will often use the behavior of a leader to understand what is expected of them (Nembhard & Edmondson, 2006, p. 947). This means that leaders are one conduit for a top-down change in culture within the organizations. Therefore, an examination on leadership and its relation to or influence on psychological safety helps us to better understand how this fosters organizational outputs. Specifically, it is hoped that this examination will give insight into the actions a leader can take to help foster an environment that is psychologically safe, thereby benefitting both the team member and the organization.

The focus on leadership in this context is concentrated on the productive and positive aspects of leadership, deliberately excluding the negative side of leadership. This approach is grounded in a positive psychological perspective, aiming to offer constructive insights on leadership by highlighting effective practices and options rather than focusing on what leaders should avoid (Seligman & Pawelski, 2003, p. 162). By concentrating on the potential benefits and strategies that contribute to successful leadership, the goal is to provide practical insights that guide leaders toward positive outcomes and empower by presenting actionable solutions rather than concentrating on prohibitions.

Secondly, the focus of this thesis will be on leadership and leadership styles and not management. The difference between leadership and management is defined by Warren Bennis (1989) as the difference between education and development. Where the manager educates trough processes and rules, with shortsighted and goal-oriented thoughts, the leader is an original innovator who develops and challenges status-quo and inspires trust (Bennis, 1989, p. 37f). It can be argued that studying psychological safety and organizational outputs would be beneficial in relation to both roles. However, I will prioritize leadership styles, with reference to the Nembhard & Edmondson (2006) argument that leaders affect their team's behavior through role modelling. To create a psychologically safe workplace a leader must be brave enough to challenge the status quo paving the way toward psychological safety.

Additionally, despite being the variable of main interest in the thesis, the articles used in this review of psychological safety examined it as a mediating factor. Using psychological safety as a mediating factor allowed me to examine the concept as a part of the processes

which are already ongoing in organizations. Research suggests that leadership does not directly influence employee behavior but instead affects it through cognitive and psychological processes (Cho & Dansereau, 2010). A lot of leadership practices and their organizational outputs are already being discussed in research and organizations. This study aims to show how psychological processes are at play in the practices that might be worth exploring and harvesting more directly. Considering this, psychological safety can be seen as something which is sometimes created through leadership and sometimes not. The goal is to assess how the leader takes part in creating and fostering psychological safety and whether that translates into organizational outputs.

Lastly, while the scope of this thesis is on leadership styles, it is important to recognize that psychological safety can arise from various other factors and dynamics within an organization. Psychological safety is multifaceted and not solely dependent on leadership actions. However, to maintain clarity and specificity in the scope of this study, psychological safety is explored exclusively in relation to leadership styles and behaviors.

In the next section the concepts explored will be defined, and arguments as to why the thesis is structured around these definitions and not others will be put forward.

2.0. Definition of concepts

In this section the three concepts introduced in the research question will be defined, focus is on defining it in terms of how it will be used in the review. This will be done by placing it in a broader theoretical framework as well as defining how it is used through the thesis. The concepts introduced are psychological safety, leadership style and organizational output.

2.1. Psychological safety

This section will introduce the concept psychological safety, first outlining its theoretical roots in the psychological history and then focusing on how it is described through the theoretical framework of Amy Edmondson.

The roots of psychological safety can be traced back to Maslow's hierarchy of needs. Maslow (1943, p. 380f) describes the need for personal development, which arise when people's basic physiological needs are met. The personal development needs cover

interpersonal safety, a feeling of belonging and of not having to be afraid of rejection. Though not described as psychological safety, the construct resembles what later became known as psychological safety.

According to Edmondson & Lei (2014, p. 24f) the construct psychological safety is rooted in the work of Schein & Bennis (1965) theoretical work on organizational change, where it was defined as the individuals' sense of safety and ability to deal with changes in an assured way. According to them psychological safety is an important construct in understanding the difference between those who can and can't cope with organizational change and challenges (Edmondson & Lei, 2014, p. 25). One of the first times it was explored in an organizational context was in 1990 when Kahn studied how psychological safety, amongst other factors, influenced employee's ability to personally engage or disengage at work. His definition of psychological safety was "*feeling able to show and employ one's self without fear of negative consequences to self-image, status, or career*" (Kahn, 1990, p. 708). Kahns theory of psychological safety refers to interpersonal, group, management and organizational levels of safety. In 1999 Edmondson introduced the term Team Psychological Safety which she explained to be *"the belief that the work environment is safe for interpersonal risk taking"* (Edmondson, 1999, p. 354). In the same article she introduced The Psychological Safety Scale as a measure of psychological safety within teams (Edmondson, 1999). Her definition of psychological safety is team reliant but has an interpersonal effect as well as team effect. According to her, psychological safety makes the spaces in which people work safe for the individual to take risks, because they know mistakes are tolerated (Edmondson, 1999, p. 354f).

Since Kahn (1990) and Edmondson (1999) introduced their definitions of psychological safety, the number of studies examining the concept, how to implement and affect it in organizations, how the level of it affects the teams and organizational outputs, and other such questions has increased significantly (Newman, Donohue & Eva, 2017, p. 523). The team psychological safety is not defined by organizational culture, though it is influenced by it. This is evident as within the same organization teams can be identified which score both high and low on psychological safety. Team psychological safety is influenced by many factors, one is interpersonal climates (Edmondson, 2020, p. 33). It has a strong connection to

the trust and respect between people. Edmondson & Lei (2014, p. 25) argued that this connection was vivid as it influenced whether people share information and knowledge with each other or not. It furthermore connects to enhanced creativity, ingenuity and learning, making it important in the innovational processes in organizations (Edmondson & Lei, 2014). Ferrere, Rider, Renerte & Edmondson (2022, p. 40) argue that psychological safety in a workplace can lead to a work environment where people feel that they can speak up, which enhances the ethical conduct in the organization, because it gives people the opportunity to reinforce the ethical values that the organization stand by. Nembhard & Edmondson (2006, p. 945) also touches hierarchy and workplace status, pointing out how these can lead to domination of lower status individuals, which causes fear of negative consequences about speaking up.

The definition of psychological safety chosen for this review is based on Amy Edmondson's theoretical and empirical examination of the concept as her framework is one of the primary and most acknowledged.

2.2. Leadership styles

The review will identify several leadership styles and define them through the result section. Therefore, this section shortly defines how leadership and leadership styles are understood throughout the thesis.

Firstly, it is important to distinguish between leadership and management, to highlight why leadership was chosen as the focus and not management. The difference is described by Bennis (1989, p. 37) as one where the leader has and takes control of the work environment, whereas the manager is regulating the work environment, making sure it lives up to standards set by others. The manager is a teacher, teaching that which others have discovered, on the other hand the leader develops and challenges status quo. As argued in the demarcation, section 1.3, leadership is chosen instead of management as the leader is more change oriented.

Leadership is defined by the Dictionary of Psychology as "the exercise of authority and influence within a social group" (Reber, 1985 p. 411). Leadership is to influence and have the power to decide over a group of people, but also to use this power and make decisions. A leadership style is a certain way of doing this, it describes a behavioral style

which the leader can make use of. McGregor (1966) developed a renowned theory of leadership called Theory X and Theory Y. It distinguishes between two types of leadership which are based on two contrasting views on human motivation (McGregor, 1966, p. 11f). Overall, he argues that the leader view on human motivation and their employees will influence their leadership style. Herzberg (1999) later developed another leadership theory termed The Two-Factor theory which outlined how employees need to get their basic needs met at the job while simultaneously being motivated by it. The theory focuses on how to motivate the employee through different behaviors, highlighting the complexity of employee leadership. He describes how the leader needs to be aware of the employees need while taking actions that align with the goals of the organization (Herzberg, 1999, p. 307-309). The two theories highlight the importance of the leader to match his leadership style with both his view on motivation, while matching it with employee and organizational goals. In the Dictionary of Psychology Reber (1985, p. 411) points out how the leader cannot wear his leadership like a trait but must acknowledge that it is influenced by the situations he partakes in and thereby the people around him. This perspective points to leadership styles as situational conditioned.

Through the theories and definitions of leadership this thesis defines leadership styles as the behaviors which leaders use to influence their teams and organization. These behaviors are decided by the convictions and goals which the leader has in mind, but are also inseparable from the situation the leaders find themself in. The leader must align their behaviors with the goals of the organizations and the needs of the employee.

2.3. Organizational outputs

This section will shortly outline how organizational outputs are defined in the thesis.

In the Dictionary of Psychology (Reber, 1985 p. 527) an output is described as "...that which is 'put out', any response from an organism or any product of a system". To put this very broad definition into an organizational context Scientific Managements view on output is introduced. Hollway (1991, p. 23) describes Scientific Managements view on organizational output as that which is directly produced by the labor (Hollway, 1991 p. 23). Output is understood as something which is a result of physical labor and the organizational

production. The view on output as only a financial measure is argued by Kaplan & Norton (1996) to be outdated for today's companies. They highlight how an adequate measure must take both financial, customer, internal business processes, and learning and growth into consideration when measuring organizational outputs (Kaplan & Norton, 1996, p. 53). This addition of internal processes is also highlighted by Morgan (2006, p. 267) in Images of Organizations. He argues that outcomes are the ever fluctuation internal processes. These perspectives nuance the understanding of output to be also something which has to do with internal processes and learning and growth.

For this thesis organizational outputs are defined as both internal and external outputs, i.e. that which is produced by the organization to someone on the outside, or that which is produced within the organization. Furthermore, this output can be both physical and interpersonal, and concern growth and learning as well as financial

2.4. Hypothesis of the thesis

The leadership definition of this thesis highlights how leaders align their behavior with the needs of the organization and employee. The research on the field of psychological safety leads to the assumption that psychological safety affects the knowledge, values and growth of the organization. As organizational outputs are concerned with internal processes of growth and learning it is thought to be affected by certain leadership behaviors. This leads to the hypothesis of the thesis being that there is a positive relationship between certain leadership styles and organizational output and this relationship is mediated by psychological safety. The purpose of the review is to examine how the leadership styles affect psychological safety, to better understand its effect on organizational outputs.

3.0. Method

The previous section introduced the theoretical demarcation of the concepts reviewed in the study; this section will introduce the method used to explore them.
This thesis uses critical rationalism as a lens for evaluating the studies through. Critical rationalism argues that people meet the world with expectations about what will happen and

what the truth is (Vengsgaard, 2015, p. 144). As a result of this there is no objectivity in theoretical assumptions, as our focus is always directed. The solution to this is to challenge the theoretical assumptions we might have and be critical towards the empirical evidence we collect (Vengsgaard, 2015, p. 145). Based in this philosophy of science the systematic literature review is conducted using the PRISMA 2020 statement checklist to critically and transparently explore the research question: *What is the connection between certain leadership styles and psychological safety in relation to organizational outputs according to research?* The aim of the review is to evaluate the studies which have explored this connection, and to discuss recommendations for leaders and organizations as well as areas for future research to focus on. A systematic literature review was chosen as a method, as this is a good way to discover questions that remain unanswered, as well as critically evaluate the wide range of research on a specific topic (Petticrew & Roberts, 2006, p. 21).

3.1. Systematic Literature Review

A systematic literature review is a structured and methodical approach to making sense of large bodies of research, academic articles and other types of information. The aim of the review is to gather, analyze, and synthesize existing research on a specific topic or research question making it easier to draw conclusions and make decisions based on a larger empirical foundation (Page et al., 2021, p. 179; Petticrew & Roberts, 2006, p. 2). A systematic review follows a certain well-defined structure, for other researchers to have the ability to reproduce the review later. The steps of the review also help minimize the risk of biases and boosts the reliability of the study (Green & Higgins, 2011). Grant & Booth (2009) attribute the first systematic review to the 18th century doctor James Lind, who was also the first to do a randomized controlled trial study. However, the development of the explicit method didn't come around until the 20th century, where it became especially widespread after Cochrane (1989) used the term in the forewords to a research synthesis compilation (Grant & Booth, 2009, p. 92; Chalmers et al., 2002, p. 16).

Systematic reviews are distinguished from other review types primarily through its rigorous and structured methodological approach. Unlike other literature reviews, which may be more narrative and subjective, systematic reviews follow a clear protocol to minimize bias and ensure reproducibility (Petticrew & Roberts, 2006, p. 10). The purpose of the review is

to conduct a comprehensive search of the literature on a certain topic to conclude what is known, to have a foundation for practical recommendations, and to consider what needs to be covered more in depth by future research. Unlike scoping reviews, which primarily aim to map the literature and identify gaps, the systematic review often culminates in a synthesis of findings, incorporating evidence in a systematic manner (Grant & Booth, 2009, p. 95; Petticrew & Roberts, 2009, p. 15).

The steps of a systematic review are to first and foremost define the field of exploration and why this is important (Page, et al., 2021, p. 183). A key question in this context is whether the motivation behind the review stems from a lack of knowledge in the practical world around a certain area, or a need to summarize findings to see where future research needs to focus? Afterwards, the research questions need to be defined alongside the exclusion and inclusion criteria, defining the measures of the studies which will be part of the review, as well as which databases will be used for the search. These decisions must be reasoned around the research question and the aim of the review for all included articles to support this. Next step is to select and collect all the data, by building a search string with keywords that revolve around the research question and the variables this focus on (Page, et al., 2021, p. 183). The search string is then used to search through the selected databases gathering all the research around the topic. After gathering all the research, the selection process begins, where studies are included and excluded based on pre-defined selection criteria. Next step is to assess the quality of the studies, which in this review is done by making a risk of bias assessment. Lastly the data is synthesized, and the results are discussed, which will be considered more in depth in the next sections.

3.2. Methodical procedure

This section will outline the methodical procedure of the study to give a clear overview of the method and steps taken to reach the results accounted for in section 4.0.

3.2.1. Framework for the review and research question
The review follows the steps of the PRISMA 2020 checklist, which is a compilation of reporting items for systematic reviews and meta-analyses, and an updated version of the PRISMA 2009 statements. This was chosen as the value of a review is enhanced with a clear and

transparent overview of the motivation behind the review, how it is executed and what has been found. The steps of the PRISMA checklist helps clarify this. Though developed for systematic reviews of studies assessing the effects of health interventions, the PRISMA 2020 checklist items are relevant for reports of systematic reviews examining other types of interventions, such as social or educational initiatives or with objectives beyond evaluating interventions (Page, et al., 2021, p. 180).

The framework for the research question was developed using the CHIP model. This model can be used to break down and get an overview of the different areas of interests regarding a research topic to make sure the search covers the evidence and studies thoroughly (Shaw, 2019, p. 81).

CHIP model	
Context	Organizations.
How	Quantitative studies measuring psychological safety using the Edmondson (1999) psychological safety scale.
Issues	The impact of different leadership styles on organizational outputs mediated by psychological safety.
Population	People in organizations, all professions, leaders and employees.

3.2.2. Search strategy and information sources
The initial literature screening was carried out in PsycInfo on the keywords "psychological safety" and "transition OR shift OR moderator OR mediator" to get an overview of the number

of studies conducted on the area. This revealed 229 hits, and studies with a broad range of focus. Therefore, next step was to introduce the term leadership which narrowed the field down to evolve around the context of the research question; organizational, and the issue of how leadership style and psychological safety play a role in this context. This led to the following search string:

> ” Psychological safety” *AND* transition *OR* shift *OR* mediating *OR* mediator *OR* moderating *OR* moderator *AND* leadership *OR* leading *OR* “leadership style” *AND* organization *OR* organization *OR* business *OR* work
> **Peer-Reviewed Journals only**
> **All keywords in description**

The final search was carried out in Aalborg University's Database PRIMO, which combines results across several databases (including PsycArticles, Web of Science, Scopus, etc.). This database was used to increase sensitivity by improving the search scope of the review, compared to a more selective search scope (Henriksen & Ejsing-Duun, 2022). The search revealed 214 articles. The abstract and heading of these articles were then read taking the following eligibility criteria into consideration.

3.2.3. Eligibility Criteria

The eligibility criteria for this study were chosen from the principles of sensitivity and specificity, which helps the researcher retrieve enough articles that all the relevant articles within the scope are detected but without retrieving too many irrelevant studies (Petticrew & Roberts, 2009, p. 81f). The inclusion criteria were chosen based on the language, quality and scope of the articles, while focusing on the studies setting and method, and in large concentrated on sensitizing the search to include the studies which exist on the topic in the chosen databases. The exclusion criteria on the other hand specified the scope to narrow the search down and eliminate studies which weren't within the scope.

Inclusion Criteria

- Articles must be written in English or Danish.

- Only studies published in peer-reviewed journals will be considered.
- Research must be conducted within an organizational setting.
- Studies must include measures of psychological safety.
- Exposure studies (naturally occurring conditions).

Exclusion Criteria

- Research focusing on the dark side of leadership will be excluded, as the aim of this synthesis is to identify effective practices rather than detrimental ones. Additionally, examining leadership through a negative lens may alter the influence of psychological safety.
- Studies that lack a clear focus on leadership will not be included.
- Research centered on the impact of COVID-19 will be excluded to maintain relevance to organizational leadership contexts as of 2024.
- Articles that do not pertain to organizational settings will also be omitted to ensure a targeted analysis.
- Studies that do not focus on psychological safety as a mediator/moderator, as the effect of psychological safety needs to be studied within the methodical context.
- Articles using other measurements of psychological safety than Edmondson's Psychological Safety scale (Edmondson, 1999) to ensure internal reliability across studies when reviewing psychological safety as a concept.

3.2.4. Data sorting process

The following section will outline the data selection and collection process as per item 8-9 in the PRISMA 2020 statement (Page et al., 2021). In the initial phase of the sorting process, studies were screened by examining headings and abstracts to determine their alignment with the established inclusion and exclusion criteria. During this process the focus were the variables of the study, alongside the participant group and the data collection process. During the second phase of the sorting, the studies were read in depth with a focus on the methodology section and the measurement scales. The sorting process was carried out by one author alone.

Articles with different study designs were included in the review as Grant and Booth (2009) argue that restricting the synthesis to a singular design may represent a significant limitation to the interventions explored (Grant & Booth, 2009). Such a restriction can lead to the omission of essential information regarding diverse interventions and the differential effects they may produce. By incorporating multiple study designs, the synthesis can provide a more nuanced understanding of the topic at hand. This approach not only enhances the sensitivity of the review but also ensures that nuanced insights into the efficacy of various interventions are adequately captured, contributing to a more robust and informative synthesis of the existing literature.

3.2.5. Assessment of study quality

As humans and researchers, we can have trouble identifying gaps and flaws in an objective manner. We are always subject to our own preconceptions and notions, and if we are not aware of this it can affect the research we chose to involve or exclude from a review (Petticrew & Roberts, 2006, p. 125-130). Therefore, an important step in the systematic review is the risk of bias analysis, which is an assessment of all the research articles included in the review and which allows the review to comply with item 11 of the PRISMA guidelines (2020). This quality assessment is typically absent in other review types, which may simply summarize findings without evaluating their robustness or methodological rigor. As the conclusions of the systematic review rely on the quality of the research which it assesses, the quality of this research must be assured.

For this review a checklist was developed to serve this purpose, as current checklist didn't seem sufficient for the assessment of exposure studies dealing with mediating variables. The checklist was a compilation of selected criteria from ROBINS-E (Higgins et al., 2004) and CASP (Critical Appraisal Skills Program, 2024) which were then modified to fit the types of studies included in this analysis, as well as an additional criterion added from own evaluation (item 11) which address whether the credibility and limitations of the study is being discussed. CASP is a checklist which can be used for descriptive studies, which is the primary method in the articles of this review, therefore most questions stem from this checklist. From CASP the criteria chosen were (Critical Appraisal Skills Program, 2024):

- Item 1: Did the study address a clearly focused issue?

- Item 2: Did the authors use an appropriate measure to answer their questions?

- Item 3: Were the subjects recruited in an acceptable way?

- Item 5: Were the data collected in a way that addressed the research issue?

- Item 6: Did the study have enough participants to minimize the play of chance?

- Item 8: Was the data analysis sufficiently rigorous?

- Item 9: Is there a clear statement of findings?

However, some areas of the research were bias might occur are not covered by this checklist, why a decision to combine it with another checklist was made. ROBINS-E was introduced as the complementing checklist, as PRISMA refers to this for assessing risk of bias in non-randomized studies. Non-randomized studies are especially distinct from the assessment of randomized trials in the pre-intervention and intervention assessment, why this checklist can be used to supplement CASP (Stjerne, et al., 2016). From ROBINS-E the following criteria were chosen:

- Item 5: Risk of bias due to missing data (Higgins et al., 2004, p. 47)

- Item 7: Risk of bias arising from measurement of the outcome (Higgins et al., 2004, p. 53)

- Item 8: Risk of bias in selection of the reported results (Higgins et al., 2004, p. 56)

Lastly, an item 11 was created based on the assumption that discussing the limitations of the study speaks to a transparency about the process and thereby helps further eliminate the risk of bias. Below follows a complete list of items, which list they are inspired by and in cursive an elaborating reflection question for when answering the question. These reflections are written to make the selection process as transparent and replicable as possible:

1. Did the study address a clearly focused issue? (based on CASP item 1)
   (Is there a clearly focused population, research question, and variables?)

2. Did the authors use an appropriate measure to answer their questions? (based on CASP item 2)
   (Was the study design and measures used appropriate for the research question?)

3. Were the subjects recruited in an acceptable way? (Based on CASP item 3)

   (Is the sample representative so that the results can be generalized across organizations/demographics?)

4. Were the data collected in a way that addressed the research issue? (Based on CASP item 5)

   (Is the setting and method for data collection clear and justifiable?)

5. Was data missing? (Based on ROBINS-E item 5)

   (Was data missing and did this end in surveys being discarded or were values being imputed on this basis? Were reasons for the missing data discussed?)

6. Does the statistical analysis hold up to scrutiny (Based on CASP item 6)

   (Enough participants to minimize play of chance?)

7. Could the circumstances around the measurement of the variables have affected the results of the findings? (Based on ROBINS-E item 7)

   (Were all parts of the process of data collection clear and justifiable? I.e. was the leader present during any of the employee data collection steps?)

8. Was there a selection in the choice of cohort reported or in reporting of the exposure, outcome or analysis? (Based on ROBINS-E item 8)

9. Was the data analysis appropriate? (Based on CASP item 8)

   (Is the data analysis and the analysis process described in depth, clear and fitting?)

10. Is there a clear statement of findings? (Based on CASP item 9)

    (Are the findings around the direct and mediated correlations clear?)

11. Is there a discussion of the finding's limitations and credibility? (Own evaluation)

Questions which can be answered with a yes equals one point, no equals zero points and a somewhat equals half a point. Studies are only included if they score 8 or above on the assessment.

3.3. Discussion of method

In this section the method of the thesis will be discussed. First the discussion will pertain to the inclusion and exclusion criteria, and how these shaped the findings and affected the validity of the study. Afterwards the reliability of the study will be addressed.

3.3.1. Inclusion, exclusion and validity

The validity of a study or scale is an expression of whether it measures what it claims to measure (Coolican, 2013, p. 28). The review addresses the effect of psychological safety in an organizational setting, which is explored in the context of leadership and organizational outputs. The concept of main interest is psychological safety; therefore, a choice was made to only use studies whose understanding of psychological safety was based on that of the theoretical framework of Amy Edmondson. Her theory is reviewed in the definitions of concepts, section 2.1, and builds on the understanding that psychological safety is something which arises within different teams and work climates, and is affected by all members of the team, but especially shaped through the leader (Nembhard & Edmondson, 2006, p. 947). To make sure all studies measured the concept in this way, the same measurement scale – Edmondson (1999) Psychological Safety Scale – was used in all the studies. This choice was made to ensure construct validity, which accounts for whether a scale measures the construct it is intended to measure, whether it alone can account for the effect detected or whether other variables are also accountable for this effect (Coolican, 2013, p. 88). This resulted in studies, using measurements of psychological safety which were built on other theoretical frameworks than Edmondson's, being discarded, as they measured a different understanding of psychological safety and thereby a slightly different construct. Had a comparison been made across these scales in the synthesis, the construct validity of the study might have been compromised. Additionally, studies using modifications of

Edmondson's scale of psychological safety were also discarded to further align the measurement of psychological safety. The choices regarding the measurement scale ensured construct validity throughout the review. It made sure the study conclusions were all based on measurements of the same aspects of the concept psychological safety.

Another exclusion criteria concerned studies which partly focused on the impact of COVID-19 on leadership and how this impacted psychological safety and organizational outputs. These studies were excluded to maintain relevance to organizational leadership contexts as of 2024. COVID-19 introduced a lot of new challenges to organizations and leadership, all of which are valid to address. Dealing with these studies could introduce valuable information regarding how remote leadership and hybrid teams affect psychological safety and organizational outputs. However, including them meant that there would be yet another factor to take into consideration, and too many factors could affect the validity of the conclusions about whether leadership or other measures affected the psychological safety. Therefore, for this review, they were declared outside the scope.

In the process of excluding and including studies, the rational was mainly guided by the principles of sensitivity versus specificity (Petticrew & Roberts, 2009, p. 81f). Sensitizing the process enough to include all articles which were within scope, while specifying exactly what criteria would mark the studies out of scope. By excluding some studies, the review is narrowed down and is thereby more likely to conclude something concrete and applicable (Petticrew & Roberts, 2009, p. 83). In other words, the specification of the search and selection process paves the way to a more valid study, as it ensures the search captures only the studies which address the research question. However, the study must also be representative of the research conclusions that exists on the area. The less sensitive the search and study becomes, the narrower the research area is. This creates a risk that the conclusions drawn could be biased. A bias is an error or deviation from the truth, resulting from a flawed system (Green & Higgins, 2011, p. 188). This can be a flawed thought system, evaluation system, or something third. Therefore, it's crucial to ask what the effects of the removed study might have contributed with, and whether the removal of them gives way to a more concise review synthesis or a prejudiced one. By defining the search and selection criteria beforehand a biased selection is less likely to occur. This combined with

transparency about why certain articles are discarded, as is done in the coming result section, are the major choices of this study in attempt to achieve unbiased and valid results.

3.3.2. Reliability

Reliability concerns the replicability around a study, a measure or a process (Coolican, 2019, p. 36). When considering the reliability of this study two aspects are considered: The external and internal reliability.

External reliability is a measure of how likely a process is to produce the same result, should we choose to replicate it (Coolican, 2019, p. 194). Petticrew and Roberts (2006) argue that the data extractions process of a review can be an area at risk for creating bias. If the assessor of the studies let their choices become tampered by prior convictions or assumptions and let these – consciously or subconsciously – define the studies which are selected for the review. They call this the data extraction bias (Petticrew & Roberts, 2006, p. 155). To ensure the exclusion process of this study is free from any such bias, it builds on a quality assessment, which is presented in the result section. The framework for the assessment is displayed in the previous section, clearly demonstrating which criteria's the studies are assessed based on. This ensures the reliability and makes sure all the studies are validated against a checklist which can be replicated by other assessors. An argument could be made, that the study's reliability is weakened by the fact that only one person carried out the sorting process of studies (Petticrew & Roberts, 2006, p. 155). To minimize this effect the chart represented in the result section display the arguments around the score given to each study. By documenting each step and enhancing transparency, the review process has been made replicable for other assessors despite being carried out by only one assessor. For an even higher level of external reliability, a second assessor using the same guide could have been introduced. This way the studies and values given to each of the criteria from the risk-of-bias guide could have been double checked.

Internal reliability is the consistency of a test, scale or procedure within – in the case of this thesis internal reliability concerns whether the studies in the review address the same concepts (Coolican, 2019, p. 194). To enhance internal reliability, one of the exclusion criteria were that the studies had to use the same scale to measure psychological safety as

described above. By making sure all the studies focused on the same understanding of psychological safety, the operationalization of this concept was the same across. The operationalization of a concept ties directly together with the measurement of that concept, making it important to have a clear perception around which scale to use for the measurement (Coolican 2013, p.33). By making sure all studies used the same scale for measurement of psychological safety, it sensitizes the study to improve certainty and consistency around the results. There is a coherence between construct validity and internal reliability. However, construct validity concerns the variable measured and whether it is in fact the variable we want to measure which is measured, furthermore if it's the *only* variable we are measuring or whether there are confounding variables at play (Coolican, 2013, p. 88f). Internal reliability on the other hand concerns whether all the scales of the study measured the same concept, and thereby if the measurement would be replicable.

In sum external reliability is achieved through the transparency of the review and exclusion process and internal reliability was enhanced through the exclusion of studies which measured psychological safety with other measurement scales than Edmondson (1999) Psychological Safety Scale.

4.0. Results

In this section of the thesis the results of the study will be presented. First the risk of bias analysis will be presented, followed by a flow diagram visualizing the search- and study selection process. After, a short overview of the rationale for the exclusion process will be presented cf. item 16a and 16b of the PRISMA 2020 statement, and lastly an overview of the study characteristics is presented in the form of a chart (Page et al., 2021). The section concludes in a synthesis of the included studies, focusing on leadership behaviors associated with psychological safety, and the effects of these on organizational output.

4.1. Risk-of-bias assessment

Table 1.0: *Risk-of-bias analysis evaluating each article following the Risk-of-bias checklist developed in section 3.2.5. assessment of study quality.*
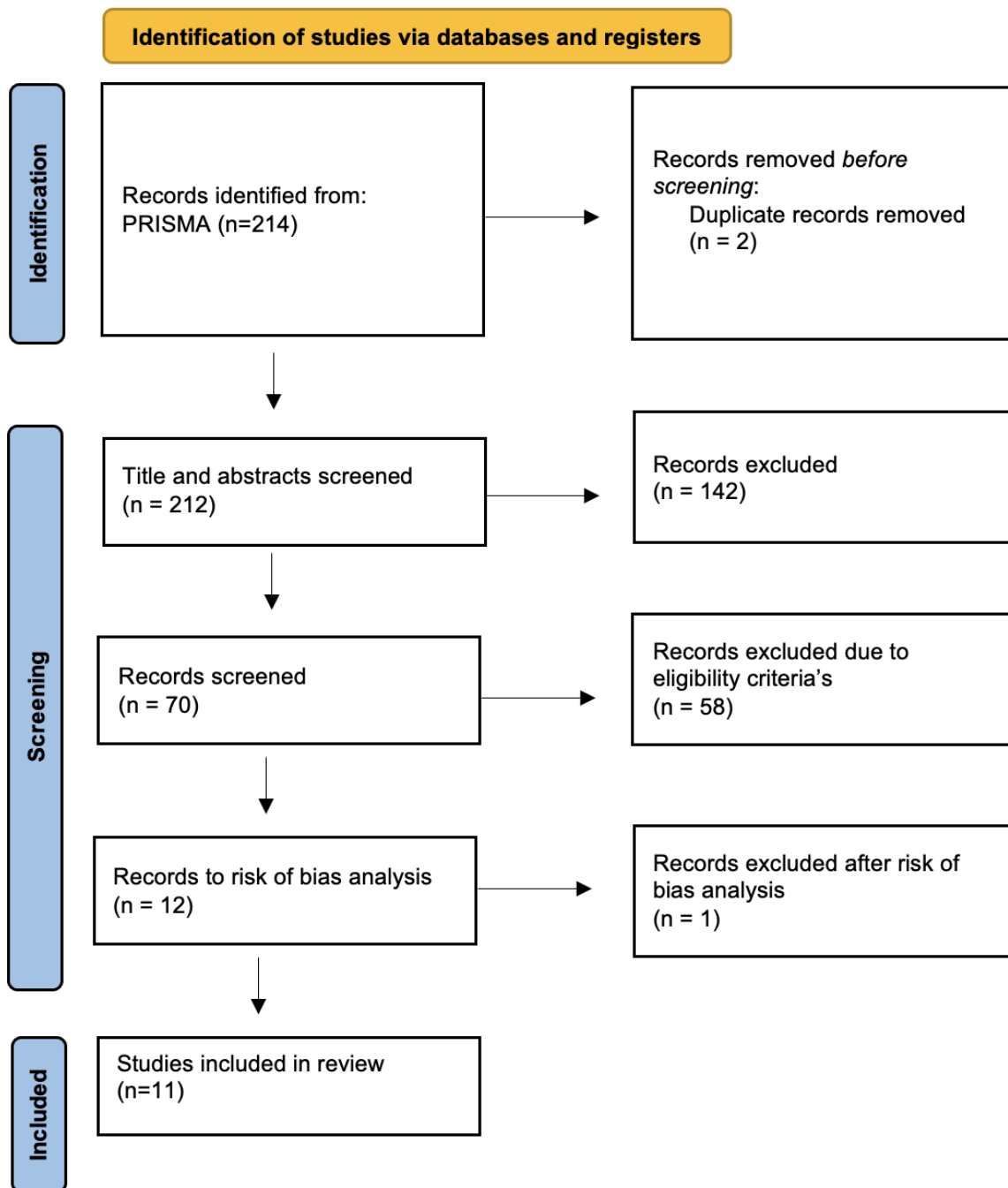*Yes (V) = one point, no (x)= zero points, somewhat/unclear (/) = half a point.*
Studies are only included if they score 8 or above on the assessment.

N=12	CLEARLY FOCUSED ISSUE?	APPROPRIATE MEASURE TO ANSWER QUESTION?	SUBJECT RECRUITMENT ACCEPTABLE?	DATA COLLECTED TO ADDRESS QUESTION?	RISK DUE TO DATA MISSING	DOES THE STATISTICAL ANALYSIS HOLD UP TO SCRUTINY	RISK INVOLVED IN MEASUREMENT?	RISK INVOLVED IN REPORTING?	RIGOROUS DATA ANALYSIS?	CLEAR STATEMENT OF FINDINGS?	DISCUSSION OF LIMITATIONS AND CREDIBILITY	TOTAL SCORE
BAI, ZHENG, HUANG, JING, YU, LI, & ZHANG (2023)	V	V	/ (convenience sample, 1 hospital only)	/ (workers were "encouraged" to participate by their boss)	/ (1925 invited, 931 returned valid response)	V	V	V	V	V	V	9,5/11
CHEN, JIANG, ZHANG, & CHU (2019)	V	/ (measure of spiritual leadership – unclear what this is exactly measuring)	/ (only new energy industry firms = risk of bias because participants are very similar)	/ (unclear if leaders were present – measures likely sent electronically)	/ (only people who answered everything was included (67% were disregarded), 82% response rate with remaining)	V	V	V	/ (overly complicated model)	V	V	8,5/11
GONÇALVES & BRANDÃO (2017)	V	X (correlation analysis to study mediation, not described how)	V	V	V	V	/ (unknown how employees were introduced to study + leaders self-reported team creativity)	/ (data was aggregated from individual to team level)	/ (hypotheses are not well explained through analysis)	V	V	8,5/11
HOLTZHAUSEN & DE KLERK (2018)	V	X (correlation analysis to study mediation, not described how)	V	V	V	V	V	/ (only some hypotheses were commented upon in the results)	/ (hypotheses are not well explained through analysis)	V	V	9/11
KIM, PARK & KIM (2019)	V	/ (Individual creativity – a self-reported measure from the management or team leader)	/ (management chose teams examined)	/ (unclear, not reported)	V	V	V	V	V	V	V	9,5/11
UZ ZAMAN, ATTA, PARVEZ & AHMAD (2024)	V	V	V	/ (unclear)	V	V	V	V	V	V	X	9,5/11
SAĞNAK (2017)	V	V	V	/ (not mentioned)	/ (not mentioned)	V	/ (change the measurement scale "to fit the context")	V	/ (chose a suboptimal type of statistical test (runs three separate regressions which may have inflated alpha causing significant decrease in power)	V	X	8/11
SINGH (2023)	V	V	/ (does not discuss how population was chosen or why front-line workers were used)	/ (Unclear, mailed, self-reported)	/ (380/450 response rate, 295/450 used in the end)	/ (unclear as it doesn't account for all data)	/ (all online so unclear)	/ (not discussed)	/ (relies upon a piece of data – Cronbachs Alpha – that cannot be found in the data, additionally, data are presented in such a way as to be unclear)	V	V	7,5/11
VAKIRA, SHERENI, NCUBE & NDLOVU (2023)	V	V	V	V	/ (247 out of 307 questionnaires – 80,4% response rate)	V	X (items were rephrased, unclear which and how)	V	V	V	V	9,5/11
WANG, LI, HAN & HUANG (2023)	V	V	/ (non-random sampling)	V	/ (947 forms collected, 737 deemed valid)	V	/ (Self-report data may have introduced some issues – according to authors)	V	V	V	V	9,5/11

4.2. PRISMA flow chart

Figure 1.0: *Flow-chart displaying the article exclusion process.*

Identification of studies via databases and registers

Identification

Records identified from:
PRISMA (n=214)

Records removed *before screening*:
  Duplicate records removed (n = 2)

Screening

Title and abstracts screened
(n = 212)

Records excluded
(n = 142)

Records screened
(n = 70)

Records excluded due to eligibility criteria's
(n = 58)

Records to risk of bias analysis
(n = 12)

Records excluded after risk of bias analysis
(n = 1)

Included

Studies included in review
(n=11)

4.3. Exclusion process

During the initial search process 214 articles were identified, after the first screening 70 articles remained, and these where then narrowed down to 12 articles. Through this screening, the articles excluded were based on the inclusion and exclusion criteria to narrow down the search (Petticrew & Roberts, 2009, p. 81f). Most articles were excluded based on not matching inclusion criteria's or corresponding with the first 5 exclusion criteria. However, in the second screening phase, focus was on the 6th exclusion criteria - measurement of psychological safety. It was chosen that only articles using the full Edmondson (1999) Psychological Safety scale would be included, as using different measurement scales would give different constructs of psychological safety. This thesis has chosen Edmondson theory as the framework, why the scale developed from this branch of the theory should be guiding the literature search.

In the final step of the exclusion process, the Risk of Bias assessment, one article was removed. Singh (2023) explored the association between empowering leadership and workplace proactivity with the mediating role of psychological safety. However, as it only scored 7.5 on the Risk of Bias assessment, where the cut of had been pre-decided to be 8, it was not included in the review. This assessment was based on a lack of reflection around the chosen population (item 3), that it was unclear how the data had been selected (item 4), that 85 responses were omitted, *after* the response rate had been accounted for (380 out of 450 had responded only 295 responses were part of the data) and that it wasn't accounted for why (item 5). Furthermore, it is unclear whether the statistical analysis holds up to scrutiny as it relies upon a piece of data – Cronbach's Alpha – that cannot be found in the data, additionally, data are presented in such a way as to be unclear (item 6 and 9). The answers are furthermore collected online which makes it hard to evaluate the potential risk around measuring (item 7), lastly it isn't discussed whether there is a risk in the reporting of the study, and as the study reveals no details around this it wasn't possible to evaluate the risk (item 8). Based on this assessment Singh (2023) was removed from the review.

4.4. Study characteristics

Table 2.0: *Study characteristics*

Article (n=11)	**Purpose**	**Sample**	**Analysis**	**Results**
Bai, Zheng, Huang, Jing, Yu, Li, & Zhang (2023)	To study the mediators between servant leadership and affective commitment.	*N*=931 staffs in a Chinese hospital.	Analysis: Cross-sectional design analyzed using parallel mediation. Tool: SPSS PROCESS macros 22.0.	Psychological safety and job burnout parallely and partially mediated the positive effect of servant leadership on affective commitment.
Chen, Jiang, Zhang, & Chu (2019)	To study spiritual leaderships possible contribution to enhanced proactive employee workplace behavior and the possible mediating effects of organizational identification and psychological safety.	*N*=188 subordinate leader dyads In 10 Chinese energy firms.	Analysis: Hierarchical multiple regression assessing sequential mediation effects with bootstrapping method. Tool: SPSS 22.0.	Psychological safety and organizational identification parallelly and partially mediated the relationship between spiritual leadership and proactive workplace behavior.
Gonçalves & Brandão (2017)	To study how leader humility predicts team creativity with psychological safety and psychological capital as mediators.	*N*=73 Leaders, *N*=341 team members from 40 different firms in different industries.	Analysis: Correlation matrix and Structural equation modelling. Tool: LISREL.	Psychological safety and psychological capital sequentially mediated the positive relationship between humble leadership and team creativity.
Holtzhausen & de Klerk (2018)	To study whether scrum masters make use of servant leadership and, if they do, how this impacts team effectiveness via mediating processes, such as affect-based trust in leader and psychological safety.	*N*=93 Scrum team members from 17 companies in the Western Cape, South Africa.	Analysis: Pearson's correlations, one-way ANOVA, variance based structural equation modelling (using partial least squares). Tool: Unknown.	Psychological safety and cognition-based trust sequentially partially mediated the positive significant effect of servant leadership on team effectiveness.

Kim, Park & Kim (2019)	To find underlying mechanisms which drives the relationship between transformational leadership and team-level creativity with psychological safety and employee creativity as mediators.	*N*=196 employees, 52 teams from 14 large firms in South Korea.	Analysis: Multi-level model analysis using MSEM (Multilevel Structural Equation Modeling). Tool: MPLUS 8.0.	Psychological safety and individual level creativity sequentially mediated the positive effect of transformational leadership on enhanced team.
Zaman, Atta, Parvez & Ahmad (2024)	To investigate the relationship between ambidextrous leadership and team learning, with the mediating role of psychological safety.	*N*=339 employees from the service sector.	Analysis: Mediation testing with Ordinary Least Squares (OLS) regression using Best Linear Unbiased Estimators (BLUE) with bootstrapping. Tool: SPSS 26 (PROCESS), AMOS 24.	Psychological safety fully mediated the significant positive effect of ambidextrous leadership on team learning.
Sağnak (2017)	To investigate the relationship between ethical leadership and teachers voice behavior and the mediating roles of psychological safety and ethical culture.	*N*=342 teachers, 25 primary and secondary schools from Nigde, Turkey.	Analysis: 3 Regressions to determine meditation. Tool: Unknown.	Psychological safety and ethical culture both individually, partially mediated ethical leaderships significantly positive impact on teachers' voice.
Vakira, Shereni, Ncube & Ndlovu (2023)	To assess inclusive leadership and employee engagement in the hospitality industry, studying psychological safety as a mediator.	*N*=247 employees from the hospitality industry in Zimbabwe.	Analysis: Regression analysis looking for mediation. Tool: SPSS 2.	Psychological safety partially mediated the direct positive effect of inclusive leadership on employee engagement.
Wang, Li, Han & Huang (2023)	To investigate the relationship between paradoxical leadership behavior	*N*=737 employees from various organizations in China.	Analysis: Regression with moderated	Psychological safety mediated the positive relationship between paradoxical

	and core self-evaluation and the mediating role of team psychological safety and perceived insider status.		mediation and slope analysis. Tool: SPSS 24 using model 4 of PROCESS.	leadership behavior and core self-evaluation.
Zhang & Song (2020)	To study the relationship between humble leadership and work well-being and the mediating role of psychological safety and error management climate.	*N*= 221 team members from 12 small and medium sized companies in China.	Analysis: meditation, moderation, and moderated mediation tested, Hierarchical linear modelling. Tool: HLM6.08.	Psychological safety and error management climate both individually, partially mediated the positive effect of humble leadership on work well-being.
Zhu, Khan, Nazeer, Li, Fu, Badulescu & Badulescu (2022)	To investigate ethical leadership's effect on voice behavior and to study member exchange as a moderator and psychological safety as a mediator.	*N*= 281 employees from the public corporations and private enterprises of the petroleum sector of Karachi.	Analysis: Structural equation modelling testing a direct effect and first stage moderation model combining moderation and mediation. Tool: AMOS 24.	Psychological safety partially mediated the positive effect of ethical leadership on voice behavior.

4.5. Synthesis

This section will present the results from two different perspectives. First the different leadership styles of the studies will be presented, alongside the measurement scales used to quantify the leadership style. The connection between the leadership styles and psychological safety as a mediating variable will also be presented. Afterwards the organizational outputs studied in the articles will be outlined.

4.5.1. Leadership styles

The following sections will outline the leadership styles explored in the studies and the results of these connections with psychological safety. First a chart is presented, showing the

characteristics of the leadership style measured, as per the scale used to measure it. Then a more comprehensive outline of the theory behind the leadership style and the results of its connection with psychological safety are presented.

Table 2.0: *Overview of leadership styles and measurement scales*

Leadership style	Characteristics from measurement scales	Articles
Transformational leadership	Bass & Avolio 1990 Multifactor Leadership Questionnaire - Idealized influence - Inspirational motivation - Intellectual stimulation - Individual consideration	Kim, Park, & Kim (2019)
Ambidextrous leadership	Rosing et al. 2011 Ambidextrous Leadership Scale **Opening leadership behaviours** → Towards exploratory behaviour, communication of openness and tolerance, thinking in new directions → Rewards experimentation, focus on errors to learn from them **Closing leadership behaviours** → towards confirmatory behaviour, efficiency focus, communication of conscientiousness and rule adherence → Rewards efficiency, focus on errors to avoid errors	Zaman, Atta, Parvez, & Ahmad (2024)
Ethical leadership	Brown et al. 2005 Ethical Leadership Scale - Listens - Disciplines those who violate ethical standards - Conducts personal life in ethical manner - Puts employees' best interests first - Is fair and balanced - Trustworthy - Transparent about ethics and values - Role models ethical standards - Process oriented - Focused on "the right thing" to do	Sağnak (2017) Zhu, Khan, Nazeer, Li, Fu, Badulescu, & Badulescu (2022)

Paradoxical leadership	Zhang et al. 2015 Paradoxical Leadership Scale - Combining self-centeredness with other-centeredness - Maintaining both distance and closeness - Uniform treatment, while allowing individualization - Enforcing requirements, with flexibility - Maintaining decision control, while allowing autonomy.	Wang, Li, Han, & Huang (2023)
Humble leadership	Owens et al. 2013 Humble Leadership Scale - Correct self-assessment - Openness to others - Openness to new ideas	Gonçalves & Brandão (2017) Zhang & Song (2020)
Inclusive leadership	Carmeli et al. 2010 Inclusive Leadership Scale - Openness to new ideas, improvements, and goals - Availability through visibility and listening - Accessibility in relations with employees	Vakira, Shereni, Ncube & Ndlovu (2023)
Spiritual leadership	Tang et al. 2014 Spiritual Leadership Measures - Vision - Hope/faith - Altruistic love	Chen, Jiang, Zhang, & Chu (2019)
Servant leadership	Liden et al. 2008 Servant Leadership Scale - Emotional healing – being sensitive to others personal concerns - Creating value for the community - Conceptual skills – skills about the organization - Empowering - Helping subordinates grow and succeed - Putting subordinates first - Behaving ethically - Relationships - Servanthood Van Dierendonck & Nuijten 2011 Servant Leadership Scale - Empowerment - Accountability - Standing back - Humility - Authenticity - Courage	Bai, Zheng, Huang, Jing, Yu, Li, & Zhang, (2023) Holtzhausen & de Klerk (2018)

	- Interpersonal acceptance - Stewardship	

4.5.1.1. Transformational leadership

Transformational leadership is described by Bass (1995) as leadership which warrant you to do more than you thought you would do originally, while raising the need you had from your job to only cover security to achieve some sort of self-actualization (Bass, 1995, p. 469). Furthermore, a transformational leader raises your level of awareness about what matters within the organization and makes you work more for the organization and less for your own goals.

Kim, Park & Kim (2019) addressed the relationship between transformational leadership and psychological safety, and how it affects an organization. In their study they define transformational leadership as "a pattern of leader behavior which not only leads followers to seek after higher-level values but also facilitates them to accomplish the goals and spirit of the group beyond personal interests and aims" (Kim, Park & Kim, 2019, p. 93). Their study showed that transformational leadership was positively associated with team level creativity affecting it in a direct way (Kim, Park & Kim, 2019, p. 100f). This relationship was mediated by psychological safety and individual creativity. The value of transformational leadership was proposed to be enhanced when there was psychological safety in the team.

They measured transformational leadership using 20 items from the Bass & Avolio 1990 Multifactor Leadership Questionnaire, which focus on four behavioral components (Bass, 1995, p. 471). The first is idealized influence, which addresses the leader's charismatic behavior, and the coworker's faith in and identification with the leader. The second behavior measures how motivating the leader is, and the ability the leader has, to inspire their team and inspire loyalty to the organization. The third component is intellectual stimulation, and it concerns the leader's ability to make the team think about problem solving in a new way. Lastly individual consideration is the ability a leader has to distinguish between employees and their individualized needs. If a person scores high on these components, they are said to be a transformational leader (Bass, 1995, p. 471). Applying transformational leadership behaviors sparks innovation and creativity. It is suggested that the effect of transformational leadership on psychological safety occurs as it creates a supportive and

empowering environment, which enhances employee's perception of support towards them being innovative (Kim, Park & Kim, 2019, p. 94). Furthermore, it facilitates knowledge sharing by creating a motivating environment and part of the value is proposed to be its connection with creativity (Kim, Park & Kim, 2019, p. 103).

4.5.1.2. Ambidextrous leadership

An ambidextrous leader is defined by Rosing, Freese and Bausch (2011) as someone who alternates between closing and opening leader behavior, while being able to switch between the two to fit the circumstances as best as possible (2011, p. 966). Ambidextrous is latin for "both favorable", and it refers to someone who can switch between using employees for the resources and jobs they require them for, closing leader behavior, while also leaving space to promote exploration and growth of new ideas, opening leader behavior, both of which are favorable leadership behaviors (Rosing, Freese & Bausch, 2011, p. 956; Zaman, Atta, Parvez & Ahmed 2024, p. 29).

According to the study by Zaman et al. (2024) ambidextrous leadership is positively associated with team learning, and this relationship was furthermore positively mediated by psychological safety. According to them, ambidextrous leaders create a team of support and trust, and the ambidextrous leader align their team towards a shared vision, whereby they enhance team learning (Zaman et al., 2024, p. 43). The study used the 13-item scale by Rosing, Frese and Bausch (2011) to measure ambidextrous leadership. The authors of this scale highlight that the ability to switch between these behaviors can't stand alone. For ambidextrous leadership to be effective the leader has to have an awareness about when one behavior is more called for than the other (Rosing, Freese & Bausch, 2011, p. 956f).

In the study, ambidextrous leadership is measured as a leader who incorporates both transformational and transactional leadership elements. The transformational leadership is needed to inspire and challenge the team toward long-term goals, whereas transactional leadership is crucial for maintaining day-to-day operations and ensuring that current performance is met (Zaman et al., 2024, p. 28). Hereby the leader can navigate between the demands of immediate results and the pursuit of future opportunities. The ambidextrous leaders must identify and leverage emerging opportunities while ensuring that

current challenges are managed effectively, using the resources of his team in the present while also focusing on sustainable growth.

4.5.1.3. Ethical leadership

According to Brown, Treviño, & Harrison (2005) ethical leadership is defined as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (Brown, et al., 2005, p. 120).

There are two studies within the review which highlight the role of ethical leadership in promoting psychological safety and encouraging voice behaviour within organizations. Zhu et al. (2022) shows how ethical leadership significantly predicts psychological safety, and how psychological safety partially mediates the positive effect of ethical leadership on voice behaviour (Zhu et al., 2022, p. 9). Similarly, Sagnak (2017) demonstrated that ethical leadership impacts voice behaviour through both ethical culture and psychological safety, with these factors acting as partial mediators. Together, they fully mediate the effect of ethical leadership on voice behaviour (Sagnak, 2017, p. 1104).

Both studies used the 10-item ethical leadership scale developed by Brown et al. (2005) to measure ethical leadership. Ethical leaders are for one measured on how normatively appropriately they act, however this dimension is open to the fact that what is appropriate is context and culture sensitive. The leaders should not only showcase this leadership style by role modeling it but also verbally communicate it to empower employees ethically (Brown et al., 2005, p. 120). The leader should also explicitly put forward the ethical standards and consider their behavior in accordance with this to make sure their behavior and choices reflect these ideals.

Additionally, according to Sagnak (2017), ethical leaders are characterized by their commitment to benefit others, promoting subordinates' ideas, and fostering an environment of trust and safety (Sagnak, 2017, p. 1103). In this way, ethical leaders not only set clear ethical standards but also create a climate in which employees feel encouraged to share their ideas without fear of retaliation. Hereby ethical leadership contributes to a culture

of openness and innovation, which fosters psychological safety, ultimately enhancing voice behaviour.

4.5.1.4. Paradoxical leadership

Zhang et al. (2015, p. 538) define paradoxical leadership as the ability to manage seemingly competing demands – handling both short and long-term perspectives - while effecting behaviors that meet both structural and follower demands, while fostering a supportive environment.

Wang, Li, Han, and Huang (2023) studied the relationships between paradoxical leadership, core self-evaluation, perceived insider status, and psychological safety, focusing on perceived insider status and psychological safety as mediators. The study finds that psychological safety positively mediates the relationship between paradoxical leadership and employees' core self-evaluation (Wang et al., 2023, p. 7–9). Specifically, when psychological safety is high, paradoxical leadership behaviors strengthen employees' self-perceptions. This relationship is further mediated by the employees' level of perceived insider status, suggesting that when employees feel included and valued, they are more likely to experience the positive impact of paradoxical leadership on their core self-evaluation (Wang et al., 2023, p. 9).

The study measured paradoxical leadership through the 22-item scale of Zhang et al. (2015) which encompasses five dimensions. First, combining self-centeredness with other-centeredness refers to a leader balancing their own vision and ideas as central, while also influencing them through shared recognition and collaborative leadership (Zhang et al., 2015, p. 541). Second, maintaining both distance and closeness involves maintaining organizational boundaries and hierarchy, yet not viewing employees as mere subordinates. The third dimensions, uniform treatment with individualization, measures how well the leader manages to treat all employees as part of the same group while also acknowledging and addressing their individual needs and contributions (Zhang et al., 2015, p. 542). Fourth, enforcing requirements with flexibility demands leaders to maintain decision control, while also allowing them to be autonomous and adaptable regarding how employees follow orders

or act independently (Zhang et al., 2015, p. 543). The final dimension requires leaders to evaluate situations carefully, balancing authority with empowerment based on the situation.

Wang et al. (2023) argue that psychological safety mediates the effectiveness of paradoxical leadership by creating a work environment where employees feel secure enough to take risks, voice opinions, and contribute meaningfully, so that as psychological safety improves, the correlation between paradoxical leadership and employees' core self-evaluations becomes stronger (2023, p. 10). In sum, Wang et al. (2023) highlight psychological safety as enhanced through paradoxical leadership, which ultimately lead to a higher core self-evaluation amongst employees.

4.5.1.5. Humble leadership

Humble leadership is defined by Owens et al. (2013, p. 1518) as: "an interpersonal characteristic that emerges in social contexts that connotes (a) a manifested willingness to view oneself accurately (b) a displayed appreciation of others' strengths and contributions, and (c) teachability". Humble leaders display self-awareness and actively engage in self-assessment, seeking feedback not only from themselves but also from peers and team members (Owens et al., 2013, p. 1519). This self-reflection allows the leaders to grow while indicating to employees that failure is part of the learning process, and that growth is valued over perfection.

Secondly, humility involves the capability to see others in an appreciative manner, by which leaders actively recognize and value the strengths of their team members. They create a supportive environment where individuals feel empowered to contribute without fear of judgment (Owens et al., 2013, p. 1519f). Gonçalves and Brandão (2017) propose that leaders who feel secure and unthreatened by the capabilities of others are more likely to role-model these behaviors and thereby create a sense of safety on the team's leading to growth in creativity (Gonçalves & Brandão, 2017, p. 967). So, when leaders focus on others' potential, they foster an atmosphere of trust and respect, which is crucial for cultivating psychological safety.

Lastly, humble leaders are open to new ideas, indicating a willingness to look for and try out new perspectives. Humble leaders' role-model innovation within the team and

create a culture where new ideas are welcomed and explored (Owens et al., 2013, p. 1520). Humble leadership is argued to contribute to employees' knowledge about their work environment and what is expected of them, which affects the way they interpretate information and social behaviors at work (Zhang & Song, 2020, p. 9). Thereby humble leadership promotes individual growth and collective creativity.

Gonçalves and Brandão (2017) explored the relationship between humble leadership, psychological safety, and team creativity, exploring how leader humility can impact organizational outcomes. They found humble leadership to be positively associated with psychological safety, which, in turn, contributed to enhanced team creativity (Gonçalves & Brandão, 2017, p. 695f). This relationship was mediated by both psychological safety and psychological capital. They claim that humble leadership fosters psychological safety through behaviors such as accessibility, an openness about own limitations, a tolerance for failure, and an open dialogue, thereby creating an environment where creativity can thrive (Gonçalves & Brandão, 2017, p. 696). Zhang and Song (2020) support this view, finding that humble leadership is positively related to work well-being, with psychological safety playing a partial mediating role in this relationship (Zhang & Song, 2020, p. 7–8). Additionally, Zhang and Song highlight that the relationship between humble leadership and psychological safety is moderated by error management climate, with a stronger connection when the error management climate is high (Zhang & Song, 2020, p. 8). Both studies measure leader humility using the 9-item Humble Leadership Scale by Owens et al. (2013).

In sum, the findings of Gonçalves and Brandão (2017) and Zhang & Song (2020) suggest that leader humility can create conditions for creativity, through behaviors that promote psychological safety—such as self-awareness, appreciation of others, and openness to new ideas. Thereby humble leaders can develop a supportive environment where employees are empowered to share innovative ideas and contribute to the organization's growth.

4.5.1.6. Inclusive leadership

Inclusive leaders are characterized by openness, availability, and accessibility. They create a culture of trust, where employees are more likely to engage in honest communication and

take risks (Carmeli et al., 2010, p. 260). Vakira et al. (2023, p. 829) highlights that when leaders make themselves visible, approachable, and responsive to employee needs, they encourage an atmosphere of openness and psychological safety. This behavior leads to better engagement, as employees feel empowered to contribute without fear of judgment or retribution. By making themselves accessible for discussions and feedback, inclusive leaders promote an environment of trust and mutual respect, which is essential in fostering psychological safety.

Vakira, Shereni, Ncube, and Ndlovu (2023) explore the relationship between inclusive leadership and psychological safety, finding that inclusive leadership significantly enhances psychological safety and through that employee engagement. Their study finds inclusive leadership to foster an environment where employees feel comfortable sharing their ideas and concerns, as they trust that their input will be valued and that any disagreement will not lead to negative consequences (Vakira et al., 2023, p. 826). The study measures inclusive leadership using the 9-item Inclusive Leadership Scale by Carmeli et al. (2010). Vakira et al. (2023, p. 829) argue that inclusive leadership affects psychological safety by creating a workspace where employees can freely share thoughts and ideas, thus enhancing engagement and contributing to a positive organizational culture.

4.5.1.7. Spiritual leadership

Chen et al. (2019, p. 6) defines spiritual leadership by three dimensions—vision, hope/faith, and altruistic love. They examine the relationship between spiritual leadership, psychological safety, and workplace proactivity.

According to their findings, spiritual leadership positively affects workplace proactivity, and this relationship is mediated by psychological safety (Chen et al., 2019, p. 6). They state that spiritual leadership behavior positively influences psychological safety by enhancing employees' organizational identification by encouraging employees to feel a deeper sense of connection to the organization, fostering mutual care and a supportive environment where individuals feel safe to speak up without fear of negative consequences (Chen et al., 2019, p. 7). Thus, the findings of Chen et al. (2019) demonstrate that spiritual

leadership, through vision, hope, and altruistic love, creates the conditions for psychological safety, which in turn enhances a proactive workplace behaviors.

4.5.1.8. Servant leadership

Servant leaders are defined as those who: "place the needs of their subordinates before their own needs and center their efforts on helping subordinates grow to reach their maximum potential and achieve optimal organizational and career success (Liden et al., 2008, p. 163).

Bai et al. (2023) explored how servant leadership influenced employee commitment mediated through psychological safety. Servant leadership was found to positively influence affective commitment, and this relationship was partially mediated by psychological safety and job burnout (Bai et al., 2023, p. 4f). Bai et al. (2023) measured leadership, using the Servant Leadership Scale, developed by Liden et al. (2008, p. 162), which measures the construct across nine dimensions. These dimensions are (1) emotional healing through a sensitivity to others' personal concerns, (2) creating value for the community, (3) conceptual (organizational) skills, (4) empowering, (5) helping subordinates grow and succeed professionally, (6) putting subordinates first, (7) behaving ethically, (8) fostering strong and trusting relationships, and (9) servanthood to the organization. Bai et al. (2023) argue that servant leaders enhance affective commitment by making employees feel emotionally supported and thereby creating a psychologically safe environment. They do this by building good relationships with their employees which in turn fosters employees that are more willing to take interpersonal chances (Bai et al., 2023, p. 2).

Additionally, Holtzhausen and de Klerk (2018) studied how servant leadership affected team effectiveness, mediated by psychological safety. Their study's construct of servant leadership was based on the Servant Leadership Scale by van Dierendonck and Nuijten (2011) which measures the leader through eight key dimensions (2011, p. 251f). These are empowerment, accountability, standing back and prioritizing others' needs, humility, authenticity, courage, interpersonal acceptance and forgiveness, and stewardship towards organizational and societal goals. Compared to Liden et al. (2008) this scale emphasizes more personal attributes of servant leadership, such as humility and authenticity (Van Dierendonck & Nuijten, 2011, p. 251f). Holtzhausen and de Klerk found a strong correlation

between servant leadership and team effectiveness, where all servant leadership dimensions, except forgiveness and courage, correlate with team effectiveness in a positive direction (Holtzhausen & de Klerk, 2018, p. 877). Furthermore, they found positive correlations between cognition-based trust, psychological safety, and team effectiveness. The authors argue that servant leaders foster psychological safety through their focus on others' needs, ethical behavior, and open communication, which then mediates team effectiveness (Holtzhausen & de Klerk, 2018, p. 879f).

In sum, both Bai et al. (2023) and Holtzhausen and de Klerk (2018) demonstrate that servant leadership effects psychological safety and that this relation leads to positive organizational outputs displayed as team effectiveness and affective commitment. The two studies utilize different servant leadership scales, each emphasizing distinct aspects of servant leadership, while also addressing similar dimensions of the construct.

4.5.2. Organizational outputs

This section will outline the results of the dependent variable, the organizational output, from the studies. All study designs evaluated how a leadership style affected an organizational output through psychological safety as a mediator. This section will briefly and thematically introduce the outcomes studied and how they correlated with the leadership style and psychological safety.

4.5.2.1. Creativity and learning

Three studies dealt with team creativity and learning and how this was affected by leadership and psychological safety. Kim, Park and Kim (2019, p. 100) studied transformational leadership and found that this enhanced team creativity. This relationship was sequentially mediated by employee's psychological safety and individual level creativity. They used the Shin and Zhou (2007) scale to measure team creativity, and the Tierney, Farmer and Graen (1999) scale to measure individual creativity (Kim, Park & Kim, 2019, p. 98). Team creativity was defined as "The production of novel and useful ideas concerning products, services, processes, and procedures by a team of employees working together" (Kim, Park & Kim, 2019, p. 93). The sequential mediation showed that this output was affected by the leadership style,

and this process could be partly explained by the existence of psychological safety and individual level creativity, so that transformational leadership affected psychological safety, which affected individual creativity ultimately affecting team creativity. However, it is important to note, that the sequential mediation of psychological safety and individual creativity on team level creativity makes it hard to distinguish between the mediating effect of the two variables. Therefore, a future study might benefit from separating the two variables to see how much of the positive relation between transformational leadership and team level creativity is mediated through psychological safety alone.

Gonçalves and Brandao (2017) also explored team creativity, but in relation to humble leadership. They measured team creativity defined as the "creation of new and useful ideas about products, services and processes" and utilized the Scott and Bruce (1994) scale to measure this (Gonçalves & Brandao, 2017, p. 690-694). Humble leadership was found to positively affect team creativity, and this relationship was mediated by psychological capital and psychological safety. Psychological capital in this study was a measure of the employees' level of self-efficacy, hope, optimism, and resilience. Thus, two studies show that psychological safety mediates team level creativity alongside another mediator. This suggests that some of the effect of transformational and humble leadership behaviors on team level creativity can be accounted for by psychological safety.

Team learning was another organizational output which measured in relation to a leadership style, was defined as the "structured tasks or activities that help organizations develop essential capacities, improve interpersonal relations, solve problems, and achieve goals" (Zaman et al., 2024, p. 30). Team learning is thus a concept which is more focused on the human qualities developed in the organization or team instead of the outcome i.e. products and processes. It was measured by Zaman et al. (2024, p. 36) using the Zahra and George (2002) scale. They found that ambidextrous leadership had a significant effect on team learning and that this relationship was mediated by psychological safety. Summing up these studies psychological safety is shown to mediate the relationship between transformational and ambidextrous leadership styles on team learning and creativity, meaning that leading by these behaviours were shown to create a better learning process and interpersonal relations, and output in the form of product and services.

4.5.2.2. Engagement and commitment

Four of the studies in the review explored engagement and commitment as the organizational outputs. Vakira et al. (2023) looked at the effect of inclusive leadership on employee engagement with psychological safety as a mediator. They defined employee engagement as: "The organizational members controlling and characterizing their selves to become closer to their roles" (Vakira et al., 2023, p. 821). It was measured using the Utrecht Work Engagement Scale (UWES) developed by Schaufeli et al. (2002). They found that inclusive leadership directly and positively affected employee engagement, and that this relationship was partially mediated by psychological safety (Vakira et al., 2023, p. 828f). The level of psychological safety was affected by inclusive leadership, which then affected the level of employee engagement in the organization, meaning the employees tried to match with the role expected of them in the organization.

This active strive towards improving the match between organization and self was also at play in the Chen et al. (2019) study, which focused on workplace proactivity. Workplace proactivity was measured using the Parker et al. (2006) scale (Chen et al., 2019, p.3). They define the behaviour as "an autonomous course of action performed and promoted by employees. It involves anticipatory and self-initiated action that aims at changing the situation and/or oneself" (Chen et al., 2019, p. 3). It is thus as with employee engagement also a regulation of the employee self, however it is more focused on changes in the current situation whereas employee engagement is more focused on aligning the persons self with their organizational role. Chen et al. (2019, p. 6) studied spiritual leaderships effect on workplace proactivity looking at organizational identification and psychological safety as mediators. They found that there was a positive relationship between the variables and that this relation was sequentially mediated by the two mediators. However, they ran a separate statistical analysis looking at only psychological safety as the mediator and this result supported the hypothesis of psychological safety solely mediating the positive effect of spiritual leadership on workplace proactivity (Chen et al., 2019, p. 6).

Bai et al. (2023) looked at the relationship between servant leadership and affective commitment and found that there was a positive effect between the two, and that

psychological safety partially mediated this relationship. It can be argued that affective commitment, like workplace engagement, bears construct similarities with employee engagement. Affective commitment is defined as "employees' (emotional) dependence on the organization, and the extent to which employees have the same values and objectives as the organization leads" (Bai et al., 2023, p. 2). It was measured using the Meyer et al. (1993) affective commitment scale. It's distinguished from employee engagement as the construct is more passively defined. People who are affectively committed to the organization has values that resembles the organizations more, whereas employee engagement is an ongoing process where people actively try to engage more with their work roles and the organizational values. However, both constructs refer to the alignment between the values of the organization and those of the employee.

Holtzhausen and de Klerk (2018) looked at team effectiveness and how this output was affected by servant leadership and mediated by psychological safety. They measured team effectiveness by using the Larsen and La Fasto (2011) scale where team effectiveness is defined as "a team's capacity to achieve its goals and objectives" (Larsen & La Fasto, 2011, p. 875f). They found a strong correlation between servant leadership and team effectiveness, and that cognition-based trust and psychological safety mediated this relationship (Holtzhausen & de Klerk, 2018, p. 877). Team effectiveness can be argued to have some common traits with creativity and learning, as it is a self-initiated process that renews or rethinks elements within the organization, however it also speaks to the employee's engagement towards the organization.

4.5.2.3. Other organizational outputs

Four of the articles dealt with organizational outputs which didn't fit the dimensions above. The first two were Sagnak (2017) and Zhu et al. (2022) who both looked at the how certain leadership styles affected voice behaviour. Both studies used the Voice Scale developed by Van Dyne and LePine (1998) to measure voice behaviour (Sagnak, 2017, p. 1109; Zhu et al., 2022, p. 8). Voice behaviour was defined as a "pro-motive behaviour that emphasizes expression of constructive challenge oriented to improve rather than merely criticize" (Sagnak, 2017, p. 1105). Both studies found that ethical leadership significantly predicted

voice behaviour, and that psychological safety partially mediated this relationship (Sagnak, 2017, p. 1111f; Zhu et al., 2022, p. 9).

Zhang and Song (2020) explored the relationship between humble leadership and employees work well-being and whether psychological safety mediated this. They measured work well-being using the Zheng et al. (2015) scale, where the construct was a measure of the positive judgments the employees' possessed about their work. They found that team-level humble leadership was positively related to work well-being, and psychological safety was found to mediate this relationship (Zhang & Song, 2020, p. 3-6).

The last organizational output displayed in the studies was core self-evaluation which was explored by Wang et al. (2023) in relation to paradoxical leadership. They found that this relationship was positively associated and significantly mediated by psychological safety (Wang et al., 2023, p. 7). Core self-evaluation was defined as: "A broad personality trait that represents individuals' most basic evaluation of their values, abilities, and talents (Judge et al., 1998), and is composed of self-esteem, general self-efficacy, locus of control, and emotional stability" (Wang et al., 2023, p. 2). Core self-evaluation was measured using the Judge et al. (2003) scale and is argued to be a good predictor of job-satisfaction.

Summing up the organizational outputs, it can be concluded that there is support towards the hypothesis of this thesis as the leadership styles are positively affecting the above-mentioned organizational outputs with psychological safety fully or partially mediating this relationship. It becomes relevant to discuss how psychological safety is affected trough these leadership behaviours, which will be the focus of next section. By getting a clearer overview of this connection the goal is to better understand the process of creating psychological safety through leadership, thereby making it easier to replicate.

5.0. Discussion of results

The following section will discuss the results of the study. First a discussion of different leadership qualities and styles that might contribute positively to psychological safety in the workplace will unfold. A new leadership concept is proposed termed Psychological Safety Leadership. After an introduction of this proposed new concept, the strengths and limitations

of the thesis will be evaluated. This is followed by an outline of the implications for further research with emphasis on how to empirically test the new leadership concept proposed. Lastly the discussion will include a brief exploration of the practical implications of the study, highlighting how the findings may inform leadership practices in organizational contexts.

5.1. Towards a psychological safety leadership

This section will address the results and discuss the studies that showed a mediating relationship between certain leadership behaviors, psychological safety and organizational output. By thematically classifying the qualities described in the studied leadership styles, the specific behaviors or qualities a leader might embody to positively contribute to the presence of psychological safety in the workplace is identified. These qualities are described through the dimensions: fostering openness and honesty, being humble, creating a passionate environment, making failure okay, caring for employees, and being consistent. Each dimension is elaborated below. Why the behaviors are affecting psychological safety in a positive direction is discussed and informed by Edmondson (2020). A new leadership concept is proposed, termed psychological safety leadership, looking at the leadership behaviors which appear across the different styles. A suggestion for how this model could be empirically tested will be presented later.

Figure 2.0: *Psychological Safety Leadership model*
The six leadership behaviors were found to be common denominators across the leadership styles which fostered psychological safety and through that impacted organizational outputs.

5.1.1. Fostering openness and honesty

Fostering openness and honesty is the first leadership dimension hypothesized to contribute positively to the presence of psychological safety and thereby positively impact organizational output.

In their examination of ambidextrous leadership on team learning, Zaman et al. (2024) found psychological safety mediated the relationship. They argue that by role modeling openness to members of their team ambidextrous leaders build collaboration and communication within the team (Zaman et al., 2024, p. 34). One of the measures of ambidextrous leadership concerns whether the leader communicates in an open and tolerant way (Rosing et al., 2011 p. 967). This openness can concern the information they get from higher up in the business, from stakeholders or clients, it can also be openness and transparency about themselves and their thoughts on certain topics.

This is a behavioral trait was also present in both humble and inclusive leadership styles (Owens et al., 2013, p. 1519; Carmeli et al., 2010, p. 260). These leadership styles, focused on a leader's openness towards the employees and their contributions, ideas, and goals. Inclusive leadership is measured, in part, as a form of interaction that focuses on openness, availability, and accessibility (Carmeli et al., 2010, p. 250). According to Vakira et al. (2023), this type of leadership attributes to psychological safety because leaders who show openness and willingness to listen to employees create a space where employees feel safe speaking up and expressing their opinions (Vakira et al., 2023, p. 822). Owens et al. (2013) highlights how humble leaders also possess an openness towards their employees, expressed through appreciation of their unique skills and strengths (Owens et al., 2013, p. 1519f). This gives a team member the feeling of having a unique spot on the team where his or her contributions are valuable. This fosters a culture of speaking up, and thereby psychological safety.

Edmondson (2020, p. 148f) argues that creating a culture where people speak their mind and share their ideas, also when something isn't right, is part of having a psychologically safe culture. As concluded by Gonçalves & Brandão (2017) & Sağnak (2017), team level creativity and voice behaviour are both outcomes which are mediated by

psychological safety (Gonçalves & Brandão, 2017, p. 696; Sağnak, 2017, p. 1111). These behaviours are dependent on speaking up and suggesting new ways of doing things, which rely on feeling secure enough to do so.

Van Dierendonck & Nuijten (2011) also note that openness is a quality of the servant leader. Specifically, an item on the servant leadership scale measures the leaders' level of authenticity (van Dierendonck & Nuijten, 2011, p. 251). It is argued that a leaders own display of authenticity creates an atmosphere where team members can feel safe being themselves. Another of the measures of servant leadership is interpersonal acceptancy. By facilitating authenticity and honesty within a team, overall acceptance and openness within the team rises, promoting psychological safety (Bai et al., 2023, p. 2). Edmondson (2020) supports this idea when arguing that extreme openness and transparency about ideas is one of the steppingstones to creating psychological safety within a team (2020, p. 152). This is even the case when that openness stands to create conflict, as long as the conflict is productive.

In the measurement of ethical leadership, selected items focus on the leaders trustworthiness and transparency about ethics and values (Brown et al., 2005, p. 125). This requires them to be open to their team about these very values and ethics. By creating awareness around what is expected it's easier for the team to live up to these expectations. Concurrently, it makes it necessary for the leader to live up to these expectations themselves, thereby role modeling what they expect from the team. It also creates the need to take responsibility for the team living up to them and addressing it if they don't – something which potentially can lead to conflict. In this respect Edmondson (2020, p. 152f) highlights how conflict is not a bad thing but something which should be welcomed if it happens in a constructive and open way. This will be discussed in one of the later segments of this section.

In sum, leader openness and honesty in many different forms, including but not limited to openness about workplace information, personal perspectives, through role modeling, communication and collaboration, fosters authenticity and psychologically safe environments where employees feel they can be honest, speak up and express their opinions.

5.1.2. Being humble

The next leadership dimension, that was visible across the different leadership styles, is that of humbleness.

Edmondson (2020) points to listening as something which helps create psychological safety (2020, p. 158). In particular, the type of listening that ask leaders listen to their employees to learn about the knowledge they have, as opposed to the type of listening that has them listen for what they want to hear them say. In other words, if leaders listen in a humble way, letting people explore their own ideas without judgment, Edmondson suggests this creates the environment needed to foster psychological safety. Inclusive leadership is among other things measured by the leader's ability to listen to employee requests and ideas, as well as the willingness of the leader to discuss and try out new things (Carmeli et al., 2010, p. 260).

Ethical leadership displays humbleness as a measure of the leader's ability to discuss decisions with employees and listen to their inputs (Brown et al., 2005, p. 125). Sağnak (2017, p. 1111f) found that ethical leaders create an environment in which people feel they can speak up and express their true selves, and that this relationship was partly mediated by psychological safety. The study argued that when leaders support the employees when they speak up and voice their ideas and opinions, they send a message that doing so is safe, which reinforces the behavior. Edmondson (2020, p. 167) argues that the leader who wants to create psychological safety needs to actively ask for input from her employees. However, the studies show that asking for input is not enough. A leader must also take actions to show that they listen. It becomes clear that it is not only the leader's ability to create an open and honest atmosphere which is important, but also the leader's ability to humbly react to what is being said in that atmosphere that also contributes towards creating psychological safety.

Owens et al. (2013, p. 1519) describes humble leaders as those who ongoingly engage with their employees or team members in order retain a self-awareness about how they are perceived by their team. This ongoing interaction is an act of humbleness which creates trust and relational satisfaction with their team members. According to Edmondson (2020) this is part of what helps increase psychological safety within the team. This assertion

is supported by Zhang & Song (2020, p. 4) whose study found that humble leadership positively affects work well-being, and that this relationship is partially mediated by psychological safety. They argue that humble leaders listen before they speak and show their employees that their opinion matter and in doing so, help build psychological safety.

Humble leaders help people unfold their full potential, by letting them courageously pursue their own curiosities, showing that this is not frowned upon. A servant leader is described in part as one who stands back and lets others interests and goals unfold (van Dierendonck & Nuijten 2011 p. 252) which also embodies a form of humbleness. Using the van Dierendonck & Nuijten (2011) servant leadership scale Holtzhausen & de Klerk (2018, p. 878f) found that servant leaders create teams with better performances, and this relationship is partly mediated by psychological safety. They argue that this is an effect of the leader not being motivated by own interests but by getting his employees to thrive. Servant leaders are also measured on how good they are at showing their subordinates that helping them meet their work goals is important to them as a leader (Liden et al., 2008, p.162). Bai et al. (2023, p. 2) showed that this type of leadership behavior created psychological safety and ultimately improved the employee's commitment toward the organization by putting employees interests first and helping them grow.

However, the fact that it creates psychological safety when leaders stand back and show humbleness towards their employee's opinions, knowledge and goals, doesn't mean that this is always the right approach. Humble leadership is also measured on the leader's ability to hold space for duality in problem solving and evaluations in general, such that they can be open to the ideas and inputs of their team without necessarily acting on them (Owens et al., 2013, p. 1520). Thereby sometimes the right approach would be following others, and other times the right approach would be to stick with own convictions about the right way forward. Creating psychological safety is about the absence of fear, not the absence of high standards (Edmondson, 2020, p. 47). What appears to be important in this display of humbleness is leader's ability to hold space for the opportunity that they are not always right.

Lastly, both ambidextrous and paradoxical leadership also focuses on the leader's ability to be humble and communicative while shifting between handing over and keeping the leading role (Zaman et al., 2024, p. 29; Zhang et al, 2015, p. 541). Ambidextrous

leadership behavior is described, in part, as being able to shift between opening and closing leader actions. This refers to giving employees space to decision making processes while also controlling these (Rosing et al., 2011, p. 967f). Zhang et al. (2015) argues that this ability to shift is also part of paradoxical leadership (2015, p. 541f). While part of being a paradoxical leader concerns self-centeredness and maintaining a focus on the central influence of the leader, it also entails the ability to hand over control to and focus on employees' needs and desires when called for.

Humbleness is therefore a behavior which is visible across the different leadership styles that promote psychological safety. As a leader, humbleness involves listening to your employee's needs and acting on them, engaging with and helping employees when needed, and being able to shift between taking and giving control appropriately. Leading with this behavior helps create psychological safety because it creates an environment where people feel heard and valued as employees and persons.

5.1.3. Creating a passionate environment

The next leadership dimension that was observed to contribute positively to the presence of psychological safety and it's positive impact on organizational output is that of a leader's ability to be passionate and create a passionate environment.

Edmondson (2020, p. 159) points out that a leader must install in the employees the feeling that it is okay to worry about organizational challenges or dilemmas, as it is only a sign that people care about the job, and this is the kind of environment the leader should want to create to foster psychological safety.

Servant leadership is among other things measured as the employees feeling of being empowered by their leader (van Dierendonck & Nuijten, 2011, p. 251). Focus for the leader is on encouraging employees to follow their abilities and innovative desires. Thereby the servant leader empowers his team to pursue and solve issues and tasks based on their strengths (Liden et al., 2008, p. 162). Bai et al. (2023 p. 2f) highlights how servant leaders provide good work conditions and an environment that fosters creativity, which was shown to positively affect the employee's commitment towards the organization and organizational goals. When

people are cared for at their workplace, they also start caring about their workplace, which enhances the effort they put in. Therefore, an essential part of leadership is getting people to care, by translating the organizational goals into goals that matter to the employee. Chen et al. (2019, p. 3f) contend that part of being a spiritual leader is role modeling a vision that employees feel called to, thereby enhancing their sense of belonging. They argue that what helps build psychological safety is the organizational commitment and identification that arises from the leader's behavior. Empowering employees to be committed is a starting point, the next step then becomes to let the inspiration flow freely within the team, because the psychological safety won't arise until the goals and efforts transcend the hierarchical layers (Edmondson, 2020, p. 44f).

Transformational leadership engages with this pursuit, as it is measured on how inspiring the employees find their leader, both towards them and the organization, but also how much the leader manages to install inspiration within his team (Bass, 1995, p. 471). For a leader to truly create a passionate environment, the inspiration must become detached from the leader and be anchored within the team. Zaman et al. (2024, p. 34) focuses on how the ambidextrous leader tries to achieve this by encouraging innovation and experimenting. The ambidextrous leader can be very visible and active or more withdrawn (Rosing et al., 2011, p. 968). Their goal most of the time is to empower their employees. This empowerment is either focused on helping them think outside the box and be innovative, or to do their best to reach the goals that already have been set. Either way the leader must motivate their employees to be passionate around these processes (Zaman et al., 2024, p. 34).

Summing up this leadership behavior creating a passionate work environment involves empowering employees and translating the organizational goals to meaningful goals for the individual. It involves motivation and inspiration, whereby that passion and innovation become detached from the leader and anchored to the team. This creates psychological safety as it helps foster an exploratory and open work environment.

5.1.4. Making failure okay

The next leadership dimension that was observed to contribute positively to the creation of psychological safety was that of a leader's ability to make failure an unavoidable and

therefore acceptable part of working. Most people don't pursue or enjoy failure, therefore goals and how to succeed in achieving them are often highlighted, fleeing the reality that we might fail until we are unwillingly faced with it.

Edmondson (2020) states that by allowing mistakes to be a realistic part of the job and having a procedure in place for handling mistakes and learning from them, organizations create psychological safety which paves the way to growth and improved practices (2020, p. 161f).

This is a leadership trait inherent to most of the leadership styles that demonstrate a positive effect on organizational outputs mediated by psychological safety. Ethical leaders are described as fair and balanced. They're described as process orientated, focusing on what is learned more than outcomes and failures (Brown et al., 2015, p. 125). Sagnak (2017) argues that one of the reasons ethical leaders enhance team creativity through psychological safety is that when employees voice their opinions, they are morally supported and motivated by their leaders (2017, p. 1112). Even if they don't reach their goals, they are supported in the process and for trying, this makes it easier to try again later instead of playing it safe in fear of failure. But if we want people to know that failure is acceptable, it is important to not just say that failure is acceptable, but instead employees must be allowed to fail and then leaders must respond in a psychological safe way when they do.

Edmondson (2020) argues that failure is part of most developmental journeys, and it's in the failure we learn. By making failing taboo we create fear of failure, and inhibit the creative process (2020, p. 151). This is also something ambidextrous leaders understands and are described as encouraging thought in new directions, challenging the status quo and the approaches that people usually rely on (Rosing et al., 2011, p. 967). When the ambidextrous leader encounters failures or errors they have the ability to use them constructively as examples of something which their team can learn from, so that they can do better next time. Zaman et al. (2024, p. 34f) argues that the ambidextrous leader encourages independent and new ways of thinking, letting their employees think creatively in new directions and risk being wrong by role modeling that occasionally being wrong is acceptable. Servant leaders are also measured on their role modeling of taking risks and trying new things and empowering the employees to do the same (van Dierendonck & Nuijten, 2011, p. 252). What is important to

remember is that failure is not the goal, no leader wants failure, and no one wants to fail. Edmondson (2020, p. 47) also points out that a psychologically safe environment is not an environment where anything goes or employees aren't expected to live up to certain standards. But by helping employees know that failure is a natural and, at times, expected part of their work the leader helps create psychological safety which motivates people to keep trying despite the failure they encounter (Edmondson, 2020, p. 33). Bai et al. (2023) found that servant leaders improve psychological safety and argues this happens because they create an environment where it's safe for people to speak up and be innovative, by letting the employees know that they are cared for (2023, p. 2). By making it okay to fail at times, employees remain motivated and innovative because they don't fear negative consequences. Here, the success is still motivation, but the fear of failure is less likely to inhibit the drive for success.

5.1.5. Caring for your employees

Another leadership dimension that appeared to contribute positively to the presence of psychological safety and its positive impact on organizational output is that of the care the leader has for their employees. This was an important characteristic embodied by most of the leadership measurement scales and something which many of the studies had focused on as a cause of heightened in psychological safety.

Edmondson (2020, p. 164f) points out how it's important for creating a psychological safe environment to construct a climate where employees know they are cared for. What often happen as a result is that people start caring for each other, which reinforces this climate.

Spiritual leadership highlights altruistic love as an important leadership behavior (Chen et al., 2019, p. 3). It refers to the mutual care and concern between leaders and their employees, which stems from the leaders' actions of care and consideration towards their team. This care can have many facets and servant leadership describes it as the support the leader provides their team, making sure they get the credit they deserve (van Dierendonck & Nuijten, 2011, p. 252). By showing the team that they matter it fosters a feeling of importance to them. This argument about servant leadership is supported by Liden et al. (2008) who uses

a slightly different measure for servant leadership, but with many overlapping items (2008, p. 162). They argue that a big part of being a servant leader is concerned with showing sensitivity to the employees and their concerns – personal as well as work related. In extension the servant leader values and guards' relationship with her immediate followers, making a genuine effort to understand and support their career goals. This behavior ties together with the behavioral theme of listening and being humble described earlier, as the leader cannot support goals without being humble and asking about them.

By asking for inputs from employees Edmondson (2020) also argues that you show care and concern to your employees, because there is value in their opinion. Both servant and ethical leadership supports this position, and the findings of Bai et al. (2023) show that this type of leadership behavior improved psychological safety by putting employees needs first, thereby installing in them a feeling of being cared for and respected by their leaders, making it safe for them to speak their mind (Bai et al., 2023, p. 2; Brown et al., 2005, p. 125). This however isn't always an easy leadership trade; many times, it requires a great deal of energy and effort. From the classical management research Bennis (1989) points to the distinction between a leader and a manager as one of qualitative value: where the manager is concerned with doing things the right way, the leader does the right thing (1989. P. 37). And the right thing might not always be the popular thing, it might not be the same thing in every situation either. Being able to distinguish between employees and their needs in specific situations, not based on rules or norms, but making the right choices under the circumstances is what defines a leader according to Bennis.

Another way to show care to employees is to ask for their opinions. Sagnak (2017) argues that speaking up and being open can be challenging, why ethical leaders make sure to get to know their employees so that they can keep their interests in mind and protect them in situations when they need it (Sagnak, 2017, p. 1113). This makes them know that they matter and that their opinion is valued (Edmondson, 2020, p. 167). However, it is also a tool which only gives insight into people's professional sphere and makes the leader able to care for them on this level, not on a personal level. Inclusive leadership too is a form of leadership which mostly focuses on the professional sphere. It is measured on the leader's readiness to

assist his employees when and if needed, so they should never feel they carry their professional issues alone (Carmeli et al., 2010, p. 260).

However, transformational and paradoxical leadership argues that it is also important to care for employees on a personal level (Bass, 1995, p. 473; Zhang et al., 2015, p. 242). The transformational leader manages to know his employees on a personal level and takes this into consideration as part of his leadership (Bass, 1995, p. 473). Showing care on a personal level as well as professional, installs a feeling of importance in employees which fosters psychological safety. Edmondson (2020) argues that the higher the level of psychological safety, the more likely a conflict is to be positively utilized (2020, p. 79). So showing care for employees on a personal and professional level, gives the leader a mandate to hand out more direct feedback to employees without fear of how it is received.

Therefore, it can be argued that an important dimension of creating psychological safety as a leader is creating an environment where employees feel cared for. Getting to know employees on both a professional and personal level to protect their preferences and care for them is something a leader should value and focus on.

5.1.6. Being consistent

The final leadership dimension which stands out across the different leadership styles is consistency. This dimension was harder to identify, as the semantics around it fluctuated across the measurement scales, however it was clear that there was a common denominator. Leaning against the theoretical framework of Edmondson it became clear that consistency was at the heart of all the leadership styles.

Both ambidextrous and paradoxical leaders focus on the importance of being consistent about regulations and guidelines (Rosing et al., 2011, p. 967; Zhang et al., 2015, p. 543f). If these are not followed the leader must communicate the rules and expectancy to follow them and take disciplinary action to uphold the standards when not met. This can at first seem counterintuitive as leaders are also expected to make failure an excepted part of the job, however Edmondson (2020) argues that consistency and regulations when team members break the rules are not a danger to psychological safety but rather an enforcer of it (2020, p.

231). If the regulations are well-considered and non-reactive and match the violation. Paradoxical and ambidextrous leadership fluctuates between regulation and flexibility, arguing that work requirements are non-negotiable and must be adhered to and enforced, however there must be a general room of flexibility for employees to move within in the everyday life of the job (Rosing et al., 2011, p. 967; Zhang et al., 2015, p. 543f). These leadership styles foster psychological safety by being clear about the expectations of the employees and allowing errors that can be viewed as acceptable mistakes and learning experiences. However sometimes corrective action and a focus on errors is necessary to eliminate repetitive or future errors. The amount of failure allowed versus how often the team needs to work towards eliminating failure is industry and organization specific. Linking back to the openness and honesty dimension an important factor when being consistent is the transparency around what is expected, and what can be expected if this isn't met.

Ethical leadership is characterized in part on the leader's ability to set examples and discipline those who violates ethical standards (Brown et al., 2005, p. 125). Sagnak (2017) points out that ethical leaders are the managers of the moral on a team, and they uphold the moral by setting standards and making sure people live up to these to create an ethical work culture with room for everyone (2017, p. 1113). It can be argued that this explains why psychological safety gets enhanced when leaders are consistent in upholding standards and regulations, because the employees know what to expect. This is supported by van Dierendonck & Nuijten (2011) who found accountability to be an important part of servant leadership. Accountability is a central method of making sure people know what is expected of them while also making sure they live up to these expectations (2011, p. 251). By clearly conveying boundaries to one's team and being consistent in letting them know whether they live up to these boundaries or not, the team can relax in knowing what is expected of them.

This last dimension adresses one of the big critiques around psychological safety which is a concern that it creates too soft of a work environment where employees are not held accountable. However as argued by Edmondson (2020, p. 47) psychological safety is not an everything goes environment. There are still expectations towards the employees, and if they are not adhered to regulations need to follow. However, the well-considerateness and consistency of these are what fosters psychological safety.

5.1.7. Summing up Psychological Safety Leadership

Section 5.1 has outlined a proposal for a new leadership concept termed Psychological Safety Leadership. This is a concept proposed from the qualitative discussion of the review, and the identification of six primary leadership dimensions across the studied leadership styles. All the leadership styles are found to positively affect organizational outputs mediated through psychological safety. Therefore, the dimensions identified are proposed to be paramount in enhancing psychological safety. The dimensions introduced are openness and honesty, humbleness, leading with passion, making failure okay, caring for your employees and consistency. The new leadership concept is visualized in figure 2.0. This is a qualitative discussion, and to analyze and validate the proposed dimensions a study would have to explore the outlined concept. This has been outside the scope of this thesis, but a suggestion as to how such a study might be carried out is suggested in section 5.3. implications for future studies.

5.2. Strengths and limitations

This study has both strengths and limitations, which are important to consider, to get a perspective on what could be done differently in future studies, as well as what can be concluded from the review and what cannot.

Firstly, as stated in the introduction this thesis has had psychological safety at the center of its focus. Though both the concept of leadership skills and organizational outputs has been examined, psychological safety has been the phenomenon guiding the study and the results. Despite its role as a main character, psychological safety was examined as the mediating variable in the studies of the review. It's been examined in relation to the organizational outputs, as a results of the leadership styles, and lastly, it's been discussed how different leadership styles possess common behaviors which foster psychological safety. To study it in a more direct way it could be argued that the thesis could have focused on the different organizational outputs arising from a psychological safe work environment. However, for this thesis, the interesting variable was not the *type* of organizational output created. The organizational output is partly a result of psychological safety, so if we want to cultivate such

outputs, we need to know *how* to create psychological safety, not just what happens *when* we've got a psychologically safe environment. What drives the curiosity of this thesis is the impact leadership can have on fostering it and how a lot of the outputs we might attribute to a certain type of leadership are actually a result of leaders fostering psychological safety, not the leadership style in and of itself.

However, if that is the goal, it could then be argued that the study should have looked at leadership as the independent variable and its effect on psychological safety as the dependent variable. However, Edmondson (2020, p. 52) points out how psychological safety is not the end goal of an organization. It should never be the goal to attain psychological safety for the sake of having it, as it is not something which in and of itself has value to the organization. The goal must be the actual organizational gains which are exemplified by the output variable of the study. To motivate organizations to focus on psychological safety, the value to the organization must be part of the equation. Ultimately the choice to study psychological safety as a mediating variable helped strengthen the usefulness of the result to answer the research question: *What is the connection between certain leadership styles and psychological safety in relation to organizational outputs according to research?* Therefore, a strength of this study is that psychological safety is studied as part of a process, not an isolated variable.

Secondly, it can be argued that leadership style is too static a term to evaluate leaders on, as leaders must be adaptable and consequently cannot stick to one way of being a leader. As highlighted in the definition of leadership and leadership styles, section 2.2., leadership behaviors are decided by the convictions and goals which the leader has in mind, but are also inseparable from the situation the leaders find themself in. As argued by Wang et al. (2023) and Zaman et al. (2024) the value of both paradoxical and ambidextrous leadership is that it is fluid and gives the leader the opportunity to shift between leadership styles as the situation calls for (2023, p. 2f; 2024, p. 29). So, even when the fixed use of a certain leadership style might not be realistic, leaders still make use of the different styles in a more fluctuating way. Whatever style of behavior leaders chose, fixed or fluid, it can be argued that the results point out behaviors which are valuable across all leadership styles. The proposed theory of psychological safe leadership shows the value in fostering a work environment which focuses

on these common denominators, because they have great value no matter the leadership style they are expressed through.

Lastly, it can be seen as a limitation that the thesis only looked at psychological safety measured through the Edmondson (1999) Psychological safety scale, as this meant a lot of studies were omitted. However, it increases the internal reliability and validity of the study, as argued in the methodical discussion, by ensuring the construct of psychological safety explored across the studies is the same. However, in the case of future studies it could be interesting to make a systematic review, exploring the same variables, but with a different construct of psychological safety to see if and how this would affect the results.

5.3. Implications for future studies

This thesis has explored the research question: *What is the connection between certain leadership styles and psychological safety in relation to organizational outputs according to research?* This led to the hypothesis that certain leadership styles affected psychological safety in a positive direction and that this relationship was mediated by psychological safety. The hypothesis was supported by the results of the review and six leadership dimensions affecting psychological safety were identified. This led to a proposed leadership concept presented in section 5.1. concerning how to foster psychological safety as a leader. Based on the proposed new leadership style termed psychological safety leadership the following section will outline a research design which could be used to test empirically test this concept.

5.3.1. Proposed research design

To test the psychological leadership hypothesis outlined in section 5.1., a factor analysis of all the items explored in the different studies is proposed. This would display which items across the measurement scales of the different leadership styles correlates with higher scores of psychological safety, revealing which leadership behaviors are especially relevant in fostering the forms of psychological safety measured.

To investigate the proposed quantitative analysis, it would require a collection of all the original data from the 11 studies. These datasets would then need to be run through a

confirmatory factor analysis on the items to confirm whether the items group around the leadership constructs they were used for or not. Afterwards structural equation modelling should be conducted to look at the relationship between the individual items to identify new ways of grouping the leadership behaviors. Structural equation modeling is a statistical analysis which derives from factor and path analysis (Wang & Wang, 2012, p. 1). It allows for an estimation of how different variables influence one another. By identifying the relationship between the leadership behaviors and psychological safety it could be used to either support or reject the proposed psychological safety leadership. The suggested analysis will be able to reveal which leadership behaviors – derived from an inclusive list of leadership behaviors from the various types of leadership styles examined in the review – positively impact psychological safety and therefore should be incorporated into the new theory of psychological safety leadership. The results of the review presented the positive role of psychological safety on operational output. Therefore, potential follow-up research could then test this new type of leadership on desired operational outputs such as the organizational outputs explored in the thesis or other similar outputs.

5.4. Practical implications

This section will focus on the practical implications of the study and what the results can be used for. Considering psychological safety is shown to fully or partly mediate different positive organizational outputs, leaders should work on creating an environment where psychological safety is fostered. This should be done both for the benefit of the individual employee and the organization. The limitation from the previous section pointed out how leadership styles are not fixed positions but fluent behaviors which the leaders utilize as best fit the situation. Therefore, leaders should not abandon that which they that already work. However, they could focus on implementing dimensions from the proposed concept of psychological safe leadership in their everyday work alongside the things they do which already work. It is important to remember that as with all leadership it is not a one size fits all, but some behaviors will show more effective than others. Especially highlighting the behavior of humbleness and caring for your employees, it is recommended that leaders let their behavior be guided and inspired by the feedback they get from the employees about what works and

what doesn't. Implementing the behavior would be of even higher value if a study like the one explored in section 5.3 was carried out beforehand.

6.0. Conclusion

The purpose of the thesis was to examine how leadership styles affect psychological safety and to better understand its effect on organizational outputs. This was done through exploring the following research question:

> *What is the connection between certain leadership styles and psychological safety in relation to organizational outputs according to research?*

To answer the question a systematic review was conducted using the PRISMA 2020 guidelines. The study was based on a critical rationalistic approach, which entailed a critical evaluation of the studies included in the review through a Risk of Bias assessment. The Risk of Bias checklist was developed using a combination of the CASP and ROBINS-E checklists with revisions and additions. The final review examined 11 studies. With reference to selected theory and literature around psychological safety, leadership and organizational outputs, the hypothesis of the thesis was that there would be a positive relationship between certain leadership styles and organizational outputs and that this would be mediated by psychological safety.

Overall, the results revealed a positive impact of 8 different leaderships styles – ethical, humble, inclusive spiritual, servant, transformational, ambidextrous and paradoxical – on organizational outputs. The organizational outputs that were positively impacted were divided into three categories: creativity and learning, engagement and commitment and other organizational outputs which included voice behavior, employees work well-being and core self-evaluation. The relationship between all 8 leadership styles and organizational output were all partially or fully mediated by psychological safety. The leadership styles that where partially mediated by psychological safety were ethical, humble, inclusive spiritual and servant leadership. The leadership styles that where fully mediated by psychological safety were transformational, ambidextrous and paradoxical leadership. The measurement scales of the different leadership styles, alongside the results of the studies were qualitatively analyzed with regards to their impact on psychological safety. The hypothesis was confirmed as there

was a positive relationship between the examined leadership styles and organizational outputs, and this relationship was in all instances either partially or fully mediated by psychological safety.

A qualitative evaluation of these result explored and discussed the mediated relationship between leadership styles and organization output by psychological safety. This revealed six leadership dimensions which were present across all the leadership styles. These were openness and honesty, humbleness, leading with passion, making failure okay, caring for your employees and consistency. The dimensions were discussed against Edmondson (2020) theory of psychological safety, which culminated in the proposals of a new leadership style termed Psychological Safety Leadership. This concept was based on a qualitative discussion of the review, why a suggestion of how to validate the proposed concept by quantitatively examining it through a confirmatory factor model and structural equation modeling was put forth in the implications for future studies.

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