The Moderating Effect of Psychological Safety on the Relationship Between Shared Leadership and Job Satisfaction

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Abstract

The impacts and consequences of shared leadership on job satisfaction are still debated by researchers. Recent research suggests mainly positive possible effects of shared leadership on job satisfaction. However, some findings demonstrate possible negative outcomes. Due to these uncertainties, this paper investigates this relationship further and suggests psychological safety as the moderating variable in this relationship. Psychological safety was chosen as moderator, because prior research managed to establish a positive link between similar aspects like trust, well-being and the work environment and job satisfaction. The final sample used in this study was composed of 27 dyads, consisting of a leaders and followers. The participants filled in questionnaires, in order investigate this relationship. Employees and leaders received different questionnaires. A code was created for each participant, enabling the matching with their respective dyad member. The results showed a positive relationship between shared leadership and job satisfaction. However, it was insignificant.

The relationship between psychological safety and job satisfaction also turned out to be insignificant, but of negative nature. Therefore, no supportive evidence for the moderating effect of psychological safety on shared leadership and job satisfaction could be found. The importance of future research is discussed, as the study was not without limitations.

Keywords: shared leadership, psychological safety, job satisfaction

The Moderating Effect of Psychological Safety on the Relationship Between Shared Leadership and Job Satisfaction

"Because work is such an important part of people's lives, what happens at work can have a huge impact on both physical and mental well-being" (Spector, 1997, p. 19). This degree of happiness one displays is best captured as job satisfaction. It is best considered not as an emotional reaction to one's job, but it is preferable to think of satisfaction as more of a cognitive response—an assessment of a job's merits from a personal standpoint (Spector, 1997). Job satisfaction is a topic of interest for people engaged in an organization. This includes the people who work there (employees & leaders) and the people who study this field and conduct research. It is the variable that has been investigated the most frequently in academic studies on employees. It is a key element of organizational phenomena, from job design to supervision (Spector, 1997). The possible positive outcomes of job satisfaction are well known. However, research on the factors impacting job satisfaction is rather scarce. One finding on the factors influencing job satisfaction is that workers tend to be more satisfied with their jobs when they have good relationships with their leaders (Ilies et al., 2007). Thus, it can be assumed that the dyadic relationship between employees and their leaders is of importance when investigating the underlying aspects impacting job satisfaction.

The work environment, including social and physical aspects, as well as the culture present in the organization can influence job satisfaction (Spector, 1997). This includes employee well-being, work-life balance, and the climate present at work. Additionally, the role of trust plays an important factor in the relationship between leader, follower, and job satisfaction (Ilies, et al., 2007). These findings suggest that the leadership style and the resulting climate are important. Although research is lacking in this field, there is evidence linking shared leadership to increased employee satisfaction (Wu & Cormican, 2021). However, there are also findings demonstrating the possible negative consequences of shared

leadership. Role ambiguity, uncertainty, lack of cohesion, and coordination are all possible negative consequences of shared leadership, negatively impacting job satisfaction (Pearce & Conger, 2003). Thus, it is likely that another variable functions as a moderator in the relationship between shared leadership, and job satisfaction. This paper proposes this moderator to be the level of psychological safety the employee perceives in the context of work. This moderator is chosen because prior research demonstrated its positive effects on team outcomes like enhanced creativity, performance, collaboration, and openness (Edmondson, 1999). Additionally, Judge et al., (1999) managed to establish a correlation between performance, and job satisfaction. It is assumed that high levels of psychological safety impact the effect shared leadership has on job satisfaction. This builds on findings by (Ahmad & Umrani, 2019) who discovered that the effects of ethical leadership on job satisfaction are mediated by psychological safety.

As stated, prior, we investigate the dyadic relationship between an employee and his leader. A relationship always includes at least two people and perceptions can differ, so to gain an adequate picture, it is necessary to get the views of all parties included. We build on prior research as we know that the relationship between an employee and his leader is important for job satisfaction (Ilies et al., 2007). Further, we know that shared leadership can contribute to this relationship, and therefore job satisfaction (Wu & Cormican, 2021). By including psychological safety in the model, we address limitations of prior research as we investigate under which circumstances shared leadership is likely to have to best impact on job satisfaction.

Theoretical Development

Shared Leadership and Job Satisfaction

Shared leadership, the notion that individuals within a group can share leadership functions has drawn interest from practitioners and scholars (Contractor et al., 2012).

Morgeson et al. (2010) describe it as'' *a dynamic, interactive influence process among individuals in groups for which the objective is to lead one another to the achievement of group or organizational goals*.'' It provides a different viewpoint on leadership, moving away from the conventional idea of leadership as an individual-level, leader-centric phenomenon and toward a dynamic, interacting group-level leadership phenomenon (Pearce, 2004). Prior research suggests that generally speaking, shared leadership is linked positively to individual job satisfaction. According to the findings by Kark et al. (2022), teams that practice shared leadership benefit from a more empowering style of leadership, which is thought to be positively associated with job satisfaction. Team members' job satisfaction increases when there is shared leadership because it promotes a culture of empowerment, innovation, and collaboration. Team members are more likely to be happy with their jobs and perform better when they feel respected and empowered (Zhang et al., 2010). For our research, we investigate the relationship between an employee and his leader in a dyadic model. We assess shared leadership by letting the employee evaluate how he perceives it to be. The same goes for job satisfaction as we investigate the employees' subjective job satisfaction. In this paper, we are trying to confirm, and extend the findings of previous research. Specifically, the findings by (Quek, et al., 2021) who discovered that distributed leadership influences employee engagement, empowerment, and job satisfaction. The study they conducted focused on nursing staff in a large UK hospital. We extend these findings by investigating this relationship in the context of dyads consisting of Dutch workers. Thus, we state our first hypothesis as: 1) Shared Leadership is positively associated with job satisfaction.

Psychological Safety and Job Satisfaction

As stated, psychological safety is an important factor in the processes that lead to job satisfaction. Psychological safety fosters an atmosphere where people feel free to express themselves, take chances, and engage in learning activities, which has a good impact on job

satisfaction (Edmondson, 1999). Gong et al., (2018) conducted a study dealing with psychological safety and job satisfaction in the nursing profession. The study's findings highlight the significance of a psychologically secure workplace for nurses' job satisfaction and show a positive and substantial relationship between psychological safety and job satisfaction. These findings highlight the possible positive impact that psychological safety can have on job satisfaction. The dyadic model we use for this study assesses the individual's perception of the level of psychological safety present at work. We assess it by having employees as well as their leaders fill out a questionnaire. The aim of this is to confirm and extend previous research. Specifically, the findings by (Ahmad & Umrani) 2019) who managed to demonstrate a relationship between psychological safety levels and the degree of shared leadership. They conducted their study in the context of workers in the public healthcare sector in Pakistan. This paper aims at extending this research by investigating this relationship through dyads consisting of Dutch workers. We state our second hypothesis as followed: 2) Psychological safety is positively associated with job satisfaction.

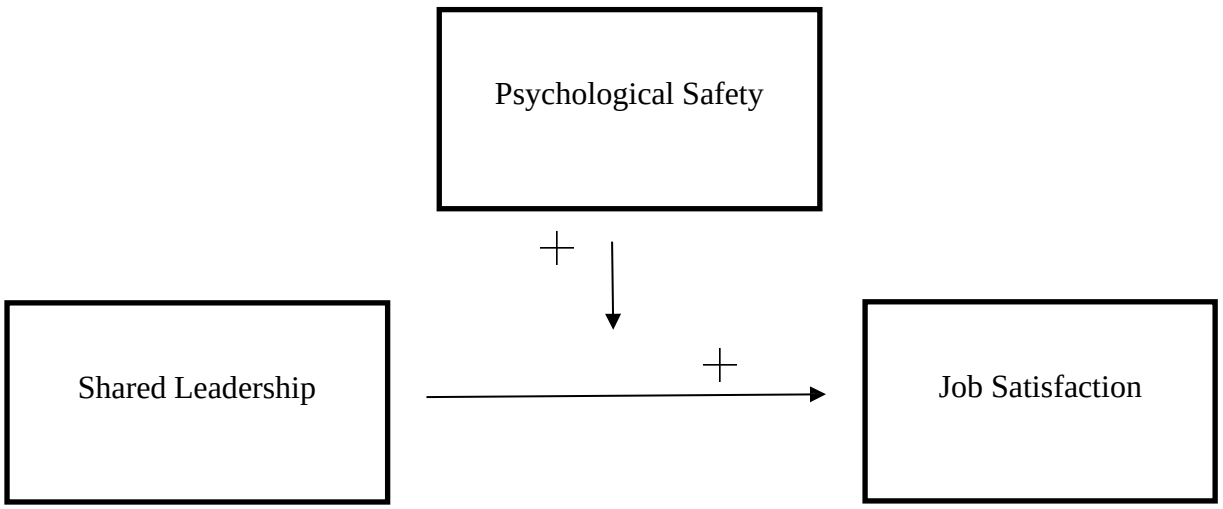
The Moderating Role of Psychological Safety

So far, we managed to demonstrate that high levels of shared leadership, and psychological safety individually can positively impact job satisfaction. In this paper, we build on these findings and try to extend them. To do so we use psychological safety as a moderator, impacting the relationship between shared leadership and job satisfaction. High levels of shared leadership are likely to have a positive impact on job satisfaction. However, they are not able to predict it. Findings by Staw et al., (1981) support this notion as they found that shared leadership alone is not enough to properly fuel job satisfaction. We suggest that high levels of perceived psychological safety are the missing piece influencing the impacts shared leadership has on job satisfaction. Psychological safety is associated with increased comfort, reduced fear, improved teamwork, better developmental opportunities, and greater

autonomy (Edmondson, 1999). Thus, assume that high levels of it in combination with shared leadership are likely to result in higher levels of job satisfaction. This paper aims at extending the prior mentioned research by investigating this relationship in the context of Dutch organizations.

Low levels of job satisfaction have been shown to negatively impact job satisfaction and the overall well-being at the workplace. Frazier et al., (2017) managed to establish a moderate negative effect size between psychological safety and job satisfaction. Factors like trust, and organizational support proved to work as moderators in this relationship. They are closely related to our moderator variable, and thus, it is likely that we will perceive similar effects. Shared leadership leaves more room for individuals as they are less restricted. If psychological safety is high, this likely results in positive outcomes. However, if psychological safety is low, this possibly leads to less involvement in the group, resulting in decreased levels of job satisfaction. We build on previous research and plan to extend it through our research. Ahmad & Umrani (2019) managed to establish the mediating effect of psychological safety on the effects of ethical leadership on job satisfaction. This paper aims to extend this research by investigating the moderating effects of shared leadership on job satisfaction. We state our third hypothesis as followed: 3) Psychological safety moderates the relationship between shared leadership and job satisfaction: This positive relationship is stronger when psychological safety is high as compared to when it is low.

Figure 1.
Research model of the contemporary study.



Methodology

Participants

The data for this study was collected over several weeks. The basic requirements for participation in this study were to be part of a team in a working context, as we were collecting responses from leader-follower dyads. Further, they needed to work at least 20 hours per week. Initially, we gathered responses from 87 Dutch speaking leaders and Dutch-speaking 79 employees. We had to exclude a huge part of the initial sample, as most of them were not matching dyads and thus, could not be used for the dyadic model. After that 29 dyads were remaining. For this specific model, another two dyads had to be excluded as the scales for shared leadership, and for psychological safety had not been sufficiently filled out.

The final sample of employees consisted of 11 male participants and 16 female participants. The mean age was 32.56 years old with a standard deviation of 11.01. The youngest participant was 19 years old while the oldest one was 57 years old. For the leaders, the sample consisted of 15 males and 11 females, as one of the participants did not indicate his age or gender. The mean age was 43.08 years old with a standard deviation of 13.57 The youngest leader was 22 years old while the oldest leader was 65 years old. Regarding their field of work, we received several different answers. Education and retail were most

prominent with four participants each. Followed by catering and business service with three each. Further, two participants indicated working each in welfare care and information and communication technologies.

Research Design and Procedure

The data was gathered from multiple individuals representing leaders and employees from several organizations in the Netherlands. Thus, it is a cross-sectional multi-source study in the context of Dutch organizations. This research, which is a component of the Bachelor of Psychology bachelor thesis, was approved by the University of Groningen's Faculty of Social and Behavioral Sciences Ethics Committee. A Qualtrics online survey was used to distribute the convenience sample for this investigation. The survey was distributed online and via approaching people in person. The data collection via in-person approach mainly took place in Groningen, Netherlands. In order not to violate the anonymity of the data, an individual code was created for each person. This code consists partly of one’s last name, partly of one’s employee/leader’s name, and partly of one’s organizational name. Before participation, one was informed about the details of the study and its intentions. Additionally, participants gave their informed consent and have been informed that participation is voluntary. Refusal to participate would have no consequences. There was no payment made in exchange for their involvement. Lastly, the study, and therefore, data collection was conducted in Dutch.

The Questionnaire assessed different workplace-related aspects, including shared leadership, psychological safety, and job satisfaction. Leaders and employees received different questionnaires. The questionnaires consisted of different scales assessing these factors via different items. Most of these scales used for assessing the participants are seven-point scales ranging from (1) Strongly disagree to (7) Completely agree. The assessment was expected to take 15 minutes.

Materials

Shared leadership

The degree of shared leadership was assessed on a scale consisting of 18 items, which was developed by Hoch (2013). The assessment took place for both, the leader and the employee. The overall shared leadership was computed out of two dimensions (1) transformational leadership and (2) empowering leadership. Six items were used to assess transformational leadership, representing the six following behaviors of transformational leadership. (a) *idealized,* (b) *inspirational motivation*, (c) *individualized*, (d) *intellectual stimulation*, (e) *challenging the status*, (f) *expecting exceptional performance*. Empowering leadership was assessed via twelve different questions, four items each for individual and team empowering leadership and four items for participative goal-setting leadership. Individual empowering leadership included: (a*) encouraging independent action,* (b) *encouraging self-development,* and (c) *encouraging self-reward.* Team empowering leadership was measured using four items. This scale measured teamwork and determined whether the internal team members or the external team leader perceived the team as a vehicle for attaining the group's goals. [e.g., ‘‘My team leader (members) encourages (encourage) me to work together with other individuals who are part of the team.’’]. Participation was also measured using four items [e.g., ‘‘My team leader (members) decides (decide) on my performance goals together with me.’’]. This assessment took place on a seven-point scale and ranged from (1) Strongly disagree, to (7) Completely agree. The reliability analysis indicated high internal consistency (a = 0.8).

Psychological Safety

Applicants’ psychological safety was assessed on a scale consisting of five items, which wasdeveloped by Garvin, Edmondson, and Gino (2008). Both, the leader and employee engagedin this assessment. The five items used to assess psychological safety were(1)*In this unit, is easy to speak up about what is on your mind,* (2) *If you make a mistake in this unit, it is often held against you,* (3) *People in this unit are usually*

comfortable talking about problems and disagreements, (4) *People in this unit are eager to share information about what does and what does not work*, (5) *Keeping your cards close to your vest is the best way to get ahead in this unit*. For each of these five items, participants had to rate on a seven-point-scale how accurately each statement describes the team in which they are currently working. This scale ranged from (1) Strongly disagree, to (7) Completely agree. The only exceptions were questions (2) *If you make a mistake in this unit, it is often held against you*, and (5) *Keeping your cards close to your vest is the best way to get ahead in this unit*, which had to be reverse coded. In their case (1) indicated Completely agree, and (7) indicated Strongly disagree. The analysis of reliability indicated acceptable internal consistency (a = 0.51). The score is below the desired threshold, but given the time constraints of this project and the fact that the scale ispeer reviewed and previously published and used in other publications (Hoshina, et al., 2021) we have considered to attribute the lack of reliability to the small sample size and to continue the analyses with the scale as it is.

Job Satisfaction

Participants' Job Satisfaction was measured on a scale via four different items, which was developed by Bolin and Turnley (2005). This scale was only filled out by the employee. The scale consisted of the following statements: (1*) I really enjoy my job*, (2) *I Like my job more than the average person likes his/her job*, (3*) Most days I am enthusiastic about my job*, (4*) I feel quite satisfied with my job*. For each statement, it had to be indicated to what extent one agrees with the statement. This assessment took place on a seven-point scale and ranged from (1) Strongly disagree, to (7) Completely agree. The analysis of reliability indicated high internal consistency (a = 0.86).

Results

We predicted that a higher level of shared leadership is associated with higher perceived job satisfaction. In addition, we predicted that the relationship between perceived shared leadership and job satisfaction will be moderated by psychological safety. The model examined the relationship between leader and follower on a dyadic level. The level of shared leadership, as well as the level of job satisfaction were both rated by only the employees. The perceived level psychological safety was assessed by employee, as well as their leader. Our data was analyzed using the statistical program SPSS. Further, the PROCESS macro by Hayes (2013) was used to examine the moderator effect of psychological safety.

Descriptive Statistics

Table 1 provides insight into the correlations between shared leadership, psychological safety, and job satisfaction, as well as their respective means, and standard deviations. Shared leadership displayed (M = 5.35, SD = 0.61), had a weak relation to psychological safety (M = 6.12, SD = 0.5) (r = 0.311), and a very weak one to job satisfaction (M = 1.56, SD = 0.78) (r = .146). Psychological safety had a very weak, negative correlation with job satisfaction (r = -.099).

Table 1

Descriptive Statistics and Correlations

Variable	*N*	*M*	*SD*	1.	2.	3.
1. Shared Leadership[a]	27	5.35	0.61	–		
2. Psychological Safety[ab]	27	6.12	0.5	.311	–	
3. Job Satisfaction[a]	27	1.56	0.78	.146	-.099	–

Note. N = 27 leader-follower dyads.

[a] Rated by employees.

[b] Rated by leaders.

Assumptions

Prior to doing our primary analyses, we verified that the multiple linear regression analysis' assumptions were valid. In order to confirm that the data for all three of our variables is normally distributed, we employed the Shapiro-Wilk test (Table 2). The Shapiro-Wilk test did show significant evidence that Job Satisfaction ($W = 0.723$, $p < .001$), as well as Psychological Safety ($W = .896$, $p = .011$) were non-normally distributed. There was no evidence that Shared Leadership ($W = .966$, $p = .497$) was non-normally distributed.

Table 2

Shapiro-Wilk test to test for normality.

Variable	*W*	*df*	*p*
Job Satisfaction	.723	27	.001
Shared Leadership	.966	27	.497
Psychological Safety	.896	27	.011

Note. Significant results ($p \leq 0.05$) suggest a deviation from normality.

As a result, Kurtosis and Skewness of our data was examined (Table 3), which revealed that they were within an acceptable range as Skewness was between (-2, 2), and Kurtosis between (-7, 7). Thus, their deviation from normality was not too great and we proceeded with the analysis.

Table 3

Descriptive statistics for Shared Leadership, Psychological Safety, and Job Satisfaction

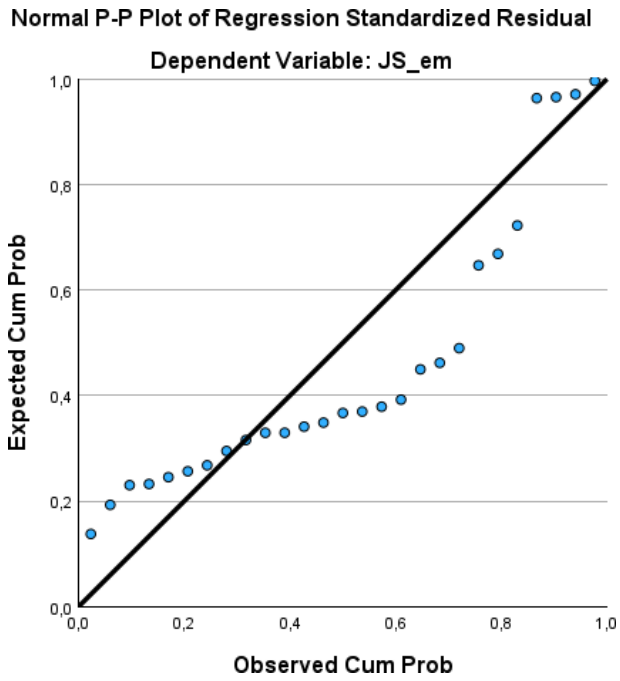
Variable	Skewness	Kurtosis
Shared Leadership	.652	.533
Psychological Safety	.121	-1.354
Job Satisfaction	1.765	2.271

Note. Skewness and Kurtosis in the acceptable range indicate no concern for violation of normality.

Following, we checked to see if our variables satisfied the criteria for linearity, which calls for a linear relationship between our independent variables ('Shared Leadership'), ('Psychological Safety'), and dependent variable ('Job Satisfaction'). The analysis indicated that the assumption is violated (Figure 2). To correct the linearity assumption, we centered the variables and performed a polynomial transformation. Even with the transformation our model still indicated non-linearity (Figure 3). Therefore, we concluded that the linearity assumption was not met.

Figure 2

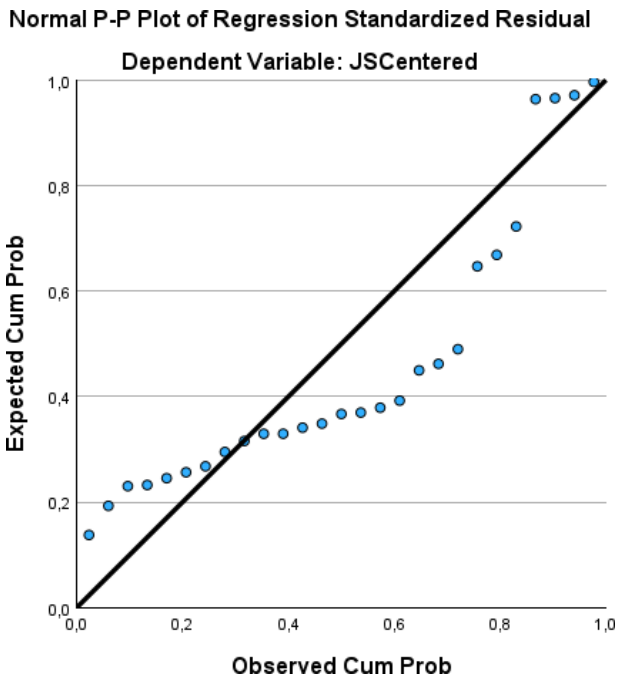
PP-Plot displaying the linearity assumption



Note. Dependent variable: job satisfaction.

Figure 3

PP-Plot displaying the linearity assumption

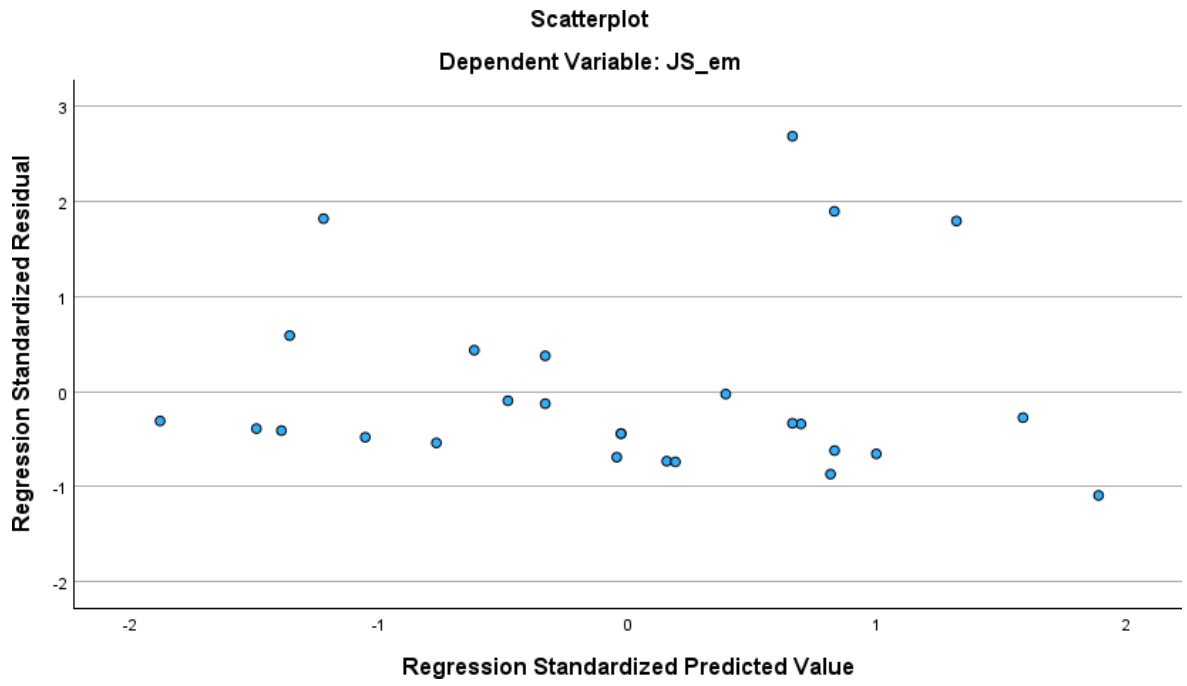


Note. Dependent variable: job satisfaction.

The scatterplot was investigated (Figure 4) to verify that the residual variance was constant. The scatterplot showed that there was no obvious pattern in the distribution of the data, hence the equality of variances assumption was satisfied. Due to the time constrictions of this project, we have concluded to proceed with the analysis as such, using caution in our conclusion.

Figure 4

Scatterplot for testing homogeneity of variances.



The Pearson correlation coefficients between our variables (Table 3) was investigated to see whether there was any evidence of a violation of the multicollinearity assumption. Although correlation was present, there was no correlation at an appropriate significance level. Therefore, it can be assumed that multicollinearity is not a problem in this model.

Table 4

Correlations

		Shared Leadership	Psychological Safety	Job Satisfaction
Shared Leadership	*r*	1	.311	.146
	p (2-tailed)		.114	.466
	N	27	27	27
Psychological Safety	*r*	.311	1	-.099
	p (2-tailed)	.114		.622
	N	27	27	27
Job Satisfaction	*r*	.146	-.099	1
	p (2-tailed)	.466	.622	
	N	27	27	27

Note. Correlation is significant at the 0.01 level (2-tailed).

Main Analysis

To test our first hypothesis (H1) that higher levels of shared leadership are associated with higher levels of job satisfaction we examined the relationship between the two. To analyze the effect of shared leadership on job satisfaction, a linear regression analysis was conducted (Table 4). The results of the analysis did not show any significant effect between shared leadership and job satisfaction *ß* = .186, *t*(27) = .740, *p* = .466, 95% *CI* = [-.333, .706]. However, as zero was included in the confidence interval and the p-value showed no significant effect we could not find any evidence to support H1.

Table 5

Coefficients table to examine the effect of Shared Leadership on Job Satisfaction.

Predictor	*B*	*SE*	*t*	*p*	95% CI	
					UL	*LL*
Constant	.558	1.358	.411	.685	3.354	-2.24
Shared Leadership	.186	.252	.740	.466	.706	-.333

Note. Dependent Variable: procedural justice. CI = confidence interval; *UL* = upper limit, *LL* = lower limit.

Further investigating the amount of variance that Shared Leadership explains for the outcome variable, we discovered R^2 = .021, *Adj.* R^2 = -.018, *SE* = .79, *F* (1, 26) = .547, *p* = .466. demonstrating that Shared Leadership accounts for 2% of the variance in our model. Increased levels of shared leadership appear to be linked to increased work satisfaction, according to the research, however, the relationship was weak and the findings were not statistically significant. This reaffirmed the absence of evidence to justify H1.

To verify our second hypothesis (H2), which states that higher levels of psychological safety are associated with higher levels of job satisfaction, we looked at the regression

output. A linear regression analysis was carried out to examine the relationship between psychological safety and job satisfaction (Table 5). The analysis's findings revealed no evidence of a significant relationship between psychological safety and job satisfaction. It is worth noting, that the relationship was negative. Satisfaction *ß* = -.155, *t*(27) = -.500, *p* = .622, 95% *CI* = [-.793, .483]. Since the p-value did not indicate a significant effect, and zero was included in the confidence interval, we found no evidence supporting H2.

Table 6

Coefficients table to examine the effect of Psychological Safety on Job Satisfaction

Predictor	*B*	*SE*	*t*	*p*	95% CI	
					UL	*LL*
Constant	2.503	1.903	1.315	.200	6.422	-1.42
Psychological Safety	-.155	.310	-.500	.622	.483	-793

Note. Dependent Variable: procedural justice. CI = confidence interval; *UL* = upper limit, *LL* = lower limit.

Further examining how much variance in the outcome variable psychological safety explains, we found R^2 =.010, *Adj.* R^2 =-.030, *SE*=.793, *F*(1, 26) =.250, *p* =.622. proving that the variance in our model is 1% explained by psychological safety. According to the research, higher levels of psychological safety may be negatively associated with greater work satisfaction, however, the association was weak and the results were not statistically significant. This further confirmed the lack of evidence to support H2.

For H3 we tested if psychological safety moderates the relationship between shared leadership and job satisfaction. This positive relationship is assumed to be stronger when psychological safety is high as compared to when it is low. The PROCESS macro (model 1) by Hayes (2013) was used to examine the moderator effect of psychological safety. Psychological safety did not moderate the effect of shared leadership on job satisfaction *ß* = -

.271 $t(27) = .313$, $p = -.865$, 95% $CI = [-.919, .377]$. Since the CI includes zero, we concluded that psychological safety had no discernible moderating influence. We discovered that the moderation has a negative slope, which, while not statistically significant, shows that the moderator's influence on the link between shared leadership and job satisfaction is present. Additionally, we discovered that our model, which includes the moderator, accounts for 16% of the variance in our outcome variable with $R^2 = .16$, $F(1, 26) = 1.463$, and $p = .251$ The model's explained variance increased by 14% as a result of the moderator. This slight rise was determined to be statistically insignificant. Thus, we could not find any evidence to support H3.

Ultimately, we were unable to find statistically significant evidence for the effects of the independent variables (shared leadership, psychological safety), indicating that they had no meaningful impact on the dependent variable (work satisfaction). Furthermore, there was no evidence to support a substantial impact of the predictors' interactions on the dependent variable.

Discussion

The goal of this study was to investigate the underlying factors of team dynamics and team hierarchies. We investigated how participants perceive their shared leadership, and job satisfaction while hypothesizing that higher levels of shared leadership lead to higher levels of job satisfaction. Further, we investigated psychological safety with job satisfaction and hypothesized that higher levels of psychological safety would lead to higher levels of job satisfaction. Lastly, we investigated the relationship of all three variables, while hypothesizing that psychological safety moderates the effect that shared leadership has on job satisfaction. This relationship is expected to be stronger when psychological safety is high as compared to when it is low. We did not find any significant results supporting these hypotheses and thus were not able to confirm them.

Theoretical Implications

We found a small positive relationship between shared leadership and job satisfaction; however, it was insignificant. Although it was insignificant, the positive effect was in line with previous research. Ilies et al., (2007) managed to establish a link between the relationship an employee has with his boss, and the resulting job satisfaction. This is further built on by Wu & Cormican, (2021) who not only managed to establish a relationship between shared leadership, and increased job satisfaction; but link shared leadership to an increase in the relationship between employee, and leader, increasing the levels of job satisfaction.

The other findings provided by the outcome of this study, however, were not in line with our expectations. To our surprise, the relationship between psychological safety and job satisfaction turned out to be, although small, of negative nature. Prior research managed to establish a link between the work environment, the social aspects of work, and the culture present at the workplace to job satisfaction (Spector, 1997). The importance of trust, especially between a leader and his followers was further highlighted by Ilies et al., (2007). Although these variables cannot be equated with psychological safety, they still measure similar aspects of work, and therefore, we would have expected to gain similar findings. Not only have significant employee outcomes and organizational performance been connected to job satisfaction. Furthermore, a company's management and operational effectiveness can be reflected in employees' job satisfaction. It may be an indication of issues with management or how work is organized (Spector, 1997. Thus, one could assume that a higher level of psychological safety would be related to higher levels of job satisfaction. This, however, did not prove to be the case in the current study

A thing worth mentioning is the overall low ratings for job satisfaction. The overall mean was merely 1.56. This rating by itself is already noticeable as it implies most of the participants are unsatisfied with their current work. Before our research we assumed that job

satisfaction and psychological safety are correlated. However, psychological safety displayed a mean of 6.12. This implies that even though most participants display a high degree of psychological safety at work, they can still be unsatisfied. This might be due to the small sample size of the current study. Future research will have to investigate this relationship further.

Lastly, we did not manage to establish a positive moderating effect of psychological safety on the relationship between shared leadership and job satisfaction. As stated, prior, previous research provided evidence for the possible positive effect of shared leadership, and psychological safety on job satisfaction. Shared leadership, however, also demonstrated that it can have negative implications for job satisfaction, in the form of role ambiguity, uncertainty, and lack of cohesion (Pearce & Conger, 2003). Thus, we assumed that social, and psychological aspects of work, in the form of psychological safety act as a moderator. Our suggestion was not confirmed, as the relationship was not only insignificant but negative. This implies that an increase in psychological safety would lead to a decrease in the relationship between shared leadership and job satisfaction.

Strengths and Limitations

One limitation of this study was the small data set that we had. This led to low power and thus, unreliable results. The data collection took place over several weeks and was conducted online and via an in-person approach. One reason for the limited data set was that a requirement to participate in the study was to speak Dutch. The survey may have taken place in the Netherlands; however, it was difficult to find people who were to participate. Due to most of us not speaking Dutch, or having connections to Dutch people, it was difficult to contact people. Even people that were contacted, that responded, were willing to fill out the questionnaire, and ask their follower/leader to participate as well, could not be relied on in most cases. This is possibly due to us not having a personal connection to them, and them,

therefore, not having any interest in actually engaging in this questionnaire. Family members, friends, and people that in some sense have an obligation to fill out the questionnaire because you helped them in the past, all of these people were excluded from participating in the survey if they do not speak Dutch. Promoting something via social media or sending it in group chats is as well of no use if the people do not speak Dutch. In this present environment that is characterized by internationality, we restricted ourselves.

A strength, as well as another limitation, was the design of the model that we used. It is difficult to properly assess a topic like team dynamics and team hierarchies, without having access to the full picture. This would include having the opinions of all people engaged in this team, something that is rather unrealistic. Thus, we tried to use a more realistic mode, one that only includes one leader and one follower of the same team. However, even getting these two people to fill out a questionnaire proved to be quite difficult. We contacted most participants by walking through the city of Groningen and entering every shop/store/restaurant that seemed like it could consist of a team. Therefore, we had to approach most people while they were at work. This resulted in a lot of people being in haste, or simply too busy to fill it out at the moment. Getting one worker to fill it out on the spot proved to be difficult, but a leader and follower doing this proved to be almost impossible. Thus, we had to rely on them doing it after work, or even asking their boss first and then filling it out. So even though the design of the model was a good idea to get the best insight into a dyadic relationship, it resulted in a small participation rate. The effort that participating in this study would have entailed was seemingly just too big for most people. If a personal relationship would have been present, more people might have accepted this effort and participated.

Another limitation was the design that was used to collect the data. The participants had to fill out a questionnaire at one point in time. To assess these participants, we made use of the 7-point Likert scale. However, assessing the data at only one point in time is not

enough to sufficiently grasp the dynamics of a relationship. Impressions can change over time, and people can change over time as well. To get a better picture, this should be conducted over time and consist of assessments at different points in time. Thus, for future research putting a longitudinal design into practice should be considered. Further, the linearity assumption is violated and even through statistical adjustment it was not able to validate the assumption. This possibly leads to biased estimation, inefficient estimates, invalid inferences, inaccurate predictions, and general difficulty in the interpretation of the data.

Future Research

Despite the findings being insignificant, small correlations could still be perceived. Thus, it is important for future research to further investigate this field. Psychology is on the rise, and especially in a setting like work, its application will not decrease, but rather increase. There are many potential positive impacts this could have ranging from improved mental health to smaller turnover rates, to increased profit due to better work performance. In the studies that will build on this one, special focus should be put on the data collection and getting a sufficient number of participants. Increasing the time for data collection, increasing the number of languages, or offering a reward as compensation for participation would possibly have a positive impact on the number of participants.

Additionally, future research should investigate the impacts of shared leadership and psychological safety further. Confirming the hypothesis was not possible, and especially the relationship between psychological safety and job satisfaction was of surprise. These two have a negative relationship, even though a small one, and can be viewed with skepticism if compared to prior research in this field. The sample was small, the scales were not fully reliable, and the data was only merely normally distributed. Thus, conducting research on this topic in an appropriate setting, with sufficient power, and reliability is likely to have different outcomes.

Conclusion

This study aimed at finding evidence to support the notion that psychological safety moderates the relationship between shared leadership and job satisfaction. Nevertheless, the results provided by this study do not hint at either shared leadership, nor psychological safety having a significant impact on job satisfaction. The impact of psychological safety even proved to be a negative one. No evidence could be found to prove the moderating effect of psychological safety. Shared leadership is growing in importance in regard to the workplace, thus, future research should continue to further look into this topic, and how to possibly influence it in a positive way. It is likely that a third variable influences the effect shared leadership has on job satisfaction, thus future research should aim to discover this variable. Even though our findings dismissed the notion that psychological safety acts as this variable, our study was not without flaws. A bigger and maybe more diverse sample might be able to support our stated hypothesis.

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Appendix A

Shared Leadership Scale (Hoch, 2013):

(A) Transformational leadership:

1. ‘‘My colleagues provide a clear vision of whom and what our team is.’’
2. ‘‘My colleagues are driven by higher purposes or ideals.’’
3. ‘‘My colleagues show enthusiasm for my efforts.’’
4. ‘‘My colleagues encourage me to rethink ideas which had never been questioned before.’’
5. ‘‘My colleagues seek a broad range of perspectives when solving problems.’’
6. ‘‘My colleagues encourage me to go above and beyond what is normally (e.g., extra effort).’’

(B) Individual empowering leadership:

7. ‘‘My colleagues encourage me to search for solutions to my problems without supervision.’’
8. ‘‘My colleagues urge me to assume responsibilities on my own.’’
9. ‘‘My colleagues encourage me to learn new things.’’
10. ‘‘My colleagues encourage me to give myself a pat on the back when I meet a new challenge.’’

(C) Team empowering leadership:

11. ‘‘My colleagues encourage me to work together with other individuals who are part of the team.’’
12. ‘‘My colleagues advise me to coordinate my efforts with the others, who are part of the team.’’

13. ‘‘My colleagues urge me to work as a team with the others, who are part of the team.’’
14. ‘‘My colleagues expect that the collaboration with the other members in the team works well.’’

(D) Participative leadership:

15. ‘‘My colleagues decide on my performance goals together with me.’’
16. ‘‘My colleagues and I work together to decide what my performance goals should be.’’
17. ‘‘My colleagues and I sit down together and reach agreement on my performance goals.’’
18. ‘‘My colleagues work with me to develop my performance goals.’’

Psychological Safety Scale (Garvin, et al., 2008):

1. In dit team is het gemakkelijk om je uit te spreken en je mening te geven
2. Als je een fout maakt in dit team, wordt dat tegen je gebruikt.*
3. Mensen in dit team praten meestal gemakkelijk met elkaar over problemen en meningsverschillen.
4. Mensen in dit team willen graag informatie delen over wat wel en niet werkt.
5. ‘Je kaarten dichtbij je houden’ is de beste manier om vooruit te komen in dit team. *

Job Satisfaction Scale (Bolin & Turnley, 2005):

Thinking specifically about your current job, do you agree with the following?

1. I find real enjoyment in my job.
2. I like my job better than the average person.
3. Most days I am enthusiastic about my job.
4. I feel fairly well satisfied with my job.

Dutch translation (Zeer mee oneens → Zeer mee eens)

Als u specifiek aan uw huidige baan denkt, in welke mate bent u het eens met de onderstaande stellingen?

1. Ik heb echt plezier in mijn werk.
2. Ik vind mijn baan leuker dan de gemiddelde persoon zijn/haar baan vindt.
3. De meeste dagen ben ik enthousiast over mijn baan.
4. Ik voel me best wel tevreden met mijn baan.