

**The Relationship of Social Courage and Psychological Safety for Speaking up on
Speaking up for Patient Safety**

Louise Bernadet, s1037580

Master Thesis (SOW-PSMWOH70)

Faculty of Social Sciences - Radboud University

Supervisor: Cécile Boot

21st of July 2023

Wordcount without tables and figures: 5999

Wordcount executive summary: 488

Executive Summary

Studies have shown that a significant percentage of medical errors, around 60% to 70%, stem from communication issues, with 23% specifically related to not speaking up. Hence, speaking up for patient safety in healthcare can be vital for providing good and effective care. However, healthcare workers often struggle to speak up and prefer to remain silent, which can have negative consequences for safe patient care and impede learning on the individual, team, and organizational level. Therefore, this study aimed to support the RadboudUMC Health Academy by finding factors that play a role in speaking up to further optimize learning and training for Dutch healthcare workers in practice.

Barriers, like fear of social consequences, often discourage speaking up and lead employees to stay silent. To address this issue, the study investigated the potential role of social courage, which entails taking the risk that could harm one's own reputation in the eyes of others. Being able to overcome the fear may help to speak up. Additionally, the study explored the impact of psychological safety, which is the shared belief among individuals that interpersonal risk-taking is safe in their specific workplace. Psychological safety is known to facilitate speaking up in various contexts. These factors were examined to understand their potential in facilitating speaking up for patient safety in healthcare.

The study tried to explore whether psychological safety for speaking up (culture) enhances the relationship between social courage (individual trait) and speaking up for patient safety (behavior). Data was collected through a survey from 81 Dutch healthcare workers in hospitals who have patient contact. The results did not show that social courage is related to speaking up for patient safety nor that psychological safety for speaking up is related to speaking up for patient safety. Moreover, the results did not support the idea that psychological safety for speaking up strengthens the relationship between social courage and speaking up for patient safety. Interestingly, the results suggested that when social courage increases, psychological safety also increases, or vice versa.

The differences in results compared to previous literature could be attributed to differences in samples, questionnaires, and constructs. However, the current findings and previous research can still provide valuable insights to optimize training for Dutch healthcare workers in practice. To achieve this, a whole system approach should be adopted, addressing the individual, team, and organizational level. At the individual and team level, sharing mistakes during team meetings should be introduced, with primarily leaders as role models. Additionally, employees in leader positions should participate in a training focusing on adapting transformational leadership skills and encouraging them to share mistakes. Sharing mistakes and stories can contribute to build a person-centered culture (Cardiff et al., 2018), which would support a main value of the RadboudUMC. At the organizational level, a code of conduct should be implemented, which provides a framework for the employees to understand the hospital's behavioral expectations and help to reinforce the desired values into practice.

Contents

Executive Summary	2
Introduction	6
Healthcare.....	6
Speaking up for patient safety	6
Social Courage	7
Psychological Safety	8
Research Problem and Goal	9
Research Question and Hypotheses	10
Method.....	11
Procedure.....	11
Participants	12
Materials.....	13
Data Analysis	15
Results	16
Pearson’s correlation	17
Linear Regression Analyses	17
Discussion.....	18
Social courage and speaking up for patient safety (H1).....	19
Psychological safety for speaking up and speaking up for patient safety (H2)	20
Interaction (H3)	22
Limitations & Strengths	23
Practical implications	25
Conclusion.....	27
References	28
Appendices	35
Appendix A	35
Appendix B	39
Appendix C	40
Appendix D	42
Appendix D	44
Appendix E.....	46
Appendix F.....	48
Appendix G	50

Abstract

Speaking up for patient safety can be challenging within hospital hierarchies. Social courage and psychological safety may facilitate speaking up for patient safety. Therefore, this study examined how psychological safety for speaking up moderates the relationship between social courage and speaking up for patient safety in Dutch healthcare. Eighty-one Dutch healthcare workers from different hospitals were recruited via LinkedIn, e-mails, and flyers. The study included demographic questions and three questionnaires assessing social courage, psychological safety for speaking up, and speaking up for patient safety. Employing Pearson's Correlation and a linear regression analysis in SPSS, the results showed non-significant relationships between social courage or psychological safety for speaking up and speaking up for patient safety. No significant interaction effect was observed. However, psychological safety and social courage were significantly positively related. Future research should focus on exploring the different dimensions of courage.

Keywords: Social courage, psychological safety, speaking up, patient safety, healthcare

Healthcare

Sharing information and perspectives, and coordinating tasks are integral aspects of organizational functioning (Edmondson, 2004). To collaborate effectively, qualities such as trust, effective communication, and giving feedback are essential (Mickan & Rodger, 2000). Literature suggests good communication is especially important in healthcare. First, stakes are extremely high in healthcare - human life is at risk (O'Donovan & McAuliffe, 2020). Second, healthcare exhibits a complex and dynamic work environment, necessitating a high degree of interdependence, knowledge integration from different disciplines, and safe and effective care (Edmondson, 2003; Kessel et al., 2012; Nembhard & Edmondson, 2006). Despite the importance of effective communication, it often poses challenges. Contributing to the team can carry certain risks for individuals (Newman et al., 2017), and therefore employees may prefer to remain silent (Okuyama et al., 2014). This can impede individual, team, and organizational learning (O'Donovan & McAuliffe, 2020). Moreover, and of utmost importance, silence and lack of communication can jeopardize patient safety (Peadon et al., 2020). Consequently, this research will focus on speaking up in healthcare.

Speaking up for patient safety

Speaking up can be defined as behavior in which healthcare professionals voice concerns for the sake of patient safety and care quality when they identify or become aware of risky or deficient actions. These actions can be mistakes, breaking rules, or failing to follow protocols (Okuyama et al., 2014). Speaking up can prevent human errors from occurring and improve technical and system deficiencies (Okuyama et al., 2014). Studies have revealed that a substantial portion, around 60% to 70%, of medical errors are due to communication problems, with a significant proportion, 23%, specifically linked to a lack of speaking up (Peadon et al., 2020). Therefore, effective communication practices hold crucial implications for improving patient safety in healthcare (Okuyama et al., 2014). Frontline staff, including

medical residents and nurses, are well-positioned to identify early indicators of unsafe conditions and bring them to the organizations' attention (Edmondson, 2003; Tucker et al., 2008). However, even though they wish to speak up and share valuable input, research suggests that individuals often remain silent and keep important information to themselves (Okuyama et al., 2014).

The most commonly reported barriers preventing healthcare professionals of speaking up can be motivation, clinical context, general contextual and social factors, perceived safety, and efficacy of speaking up (Okuyama et al., 2014). Notably, the hierarchical structures prevalent in hospitals contribute to power imbalance that discourages lower-ranking staff from speaking up (Morrow et al., 2016). Schwappach and Niederhauser (2019) identified hierarchical level as a confounding factor, with lower hierarchical levels exhibiting lower likelihoods of speaking up and experiencing greater discomfort. In conclusion, despite the potential benefits of speaking up in preventing medical errors and saving lives, many healthcare workers perceive open communication as unsafe and ineffective and therefore decide to remain silent (Morrow et al., 2016). Therefore, this study will focus on speaking up for patient safety.

Social Courage

In order to speak up, one behavior is very prominent and important – being courageous (Edmondson, 2020). Courage encompasses multiple dimensions, namely physical, moral, and social courage (Howard et al., 2016). Social courage entails taking risks that could harm one's reputation in the eyes of others. It can damage a persons' relationship and social image, also called face-loss costs (Howard et al., 2016). Although moral courage is also important to speak up and address safety concerns, the individuals' desire to be part of their team and fear of social repercussions may outweigh the required moral courage (Martinez et al., 2015). Therefore, this study will focus on social courage, which aids in overcoming the

fear of social consequences. According to qualitative research, social courage is associated with giving negative feedback, leading others effectively, and organizational citizenship behavior (Howard et al., 2016). Although the fear of social consequences may influence these associations, social courage enables the performance of such behaviors, thereby enhancing performance, unit productivity, and the organizational climate (Howard et al., 2016). Social courage may facilitate to speak up for patient safety, overcoming the associated social risks, and ultimately positively impacting the organizational outcomes of a hospital. Thus, social courage has implications not only at the individual and team level but also at the organizational level.

Psychological Safety

A factor that may facilitate social courage is psychological safety. It refers to the individuals' shared belief that interpersonal risk-taking is safe in a particular context, such as the workplace (Edmondson, 1999). Psychological safety can vary across teams within the same organization (Edmondson, 1999). Although, team members of the same team often perceive psychological safety similarly (Edmondson, 1999), it can be measured at different levels, including the individual, group, and organizational levels (Edmondson & Lei, 2014). Although, literature suggests considering psychological safety as a group-level phenomenon (Edmondson & Lei, 2014), this study will focus on the individuals' psychological safety due to the interdisciplinary nature of healthcare teams, strong hierarchies, and individuals working within changing teams.

Psychological safety is an important factor for team learning and identified as the most important team characteristic for performing well and successfully (Detert & Burris, 2007). Research has highlighted it crucial for understanding how people work together to achieve a common outcome (Edmondson, 1999, 2004). Psychological safety is positively related to outcomes such as innovation, creativity, team and individual learning, learning initiatives,

higher work quality, employee attitudes, communication, and speaking up (Newman et al., 2017). Conversely, low psychological safety can inhibit learning processes on an individual, team, and organizational level (Detert & Burris, 2007).

Psychological safety-expert Amy Edmondson suggests that psychological safety and courage are interrelated concept, as one is likely challenging to establish without the presence of the other. Thus, it can be more challenging to establish psychological safety without courageous employees, just as being courageous without feeling psychologically safe (Edmondson, 2020). Although, it may take courage to face the risks of speaking up (Edmondson, 2020), psychological safety may help to reduce these uncertainties about the risks (Edmondson, 2004). Feeling psychologically safe facilitates the contribution of ideas, sharing information and knowledge, and speaking up (Edmondson & Lei, 2014), regardless of status and role boundaries (Edmondson, 2004). Psychological safety has been associated with increased reporting of treatment errors (Newman et al., 2017). In conclusion, psychological safety may facilitate social courage and increase speaking up.

Research Problem and Goal

This study will fill in various research gaps. First, it investigates social courage within the healthcare context. Since hospital hierarchies cannot be circumvented but have a negative impact on open communication (Morrow et al., 2016), it is important to look at individual factors that can facilitate speaking up. This research can provide valuable insights for interventions, knowing how strongly social courage may be associated with speaking up for patient safety. Interventions to enhance the healthcare workers' social courage to speak up can have life-changing implications for patients (Nembhard & Edmondson, 2006), preventing numerous errors resulting from not speaking up (Okuyama et al., 2014). Moreover, speaking up can increase learning at the individual, team, and organizational level (O'Donovan & McAuliffe, 2020). Secondly, this study quantitatively measures social courage, which is

underrepresented in research (Howard et al., 2016). Researching it quantitatively can benefit future research and practice which can help to enable positive behaviors and avoid negative consequences (Howard et al., 2016). Additionally, Howard et al. (2016) emphasize the importance of investigating courage in further studies. Thirdly, this research examines the relation of social courage, speaking up for patient safety, and psychological safety for speaking up, which has to my knowledge, not yet received any research attention. Sapra and Kumar (2020) stress the importance of understanding the concepts of courage and psychological safety to foster organizational growth. In conclusion, this study holds importance in expanding our understanding of the concepts and to develop interventions to improve patient safety.

Research Question and Hypotheses

The research question of this study is: *How does psychological safety for speaking up moderate the relationship between social courage and speaking up for patient safety in Dutch healthcare?* When deciding to speak up, one can experience an ambiguous feeling of whether the concern, idea, or question is justified, valuable, or reasonable (Bienefeld & Grote, 2014). When employees perceive risk, they are less likely to speak up (Detert & Burris, 2007). Courage enables individuals to believe in themselves, their values, and abilities and thereby facilitating speaking up in situations during which the outcomes are ambiguous or risky (Sapra & Kumar, 2020). In a study by Schwappach and Gehring (2014), one-third of the participants reported fear of the negative consequences, such as damaging good relationships as a barrier to speaking up. Social courage can help individuals confront the fear of negative social and personal consequences of speaking up (Kish-Gephart et al., 2009). Howard et al.'s (2016) findings partially support the notion that social courage is positively correlated with employee voice. Qualitative research by Law and Chan's (2015) revealed that nurses perceived bravery and courage as required for speaking up. Therefore, the first hypothesis

posits that the higher the level of social courage, the higher the likelihood of speaking up for patient safety.

The second hypothesis suggests that higher levels of psychological safety for speaking up, increase the likelihood of speaking up for patient safety. Literature has demonstrated that high psychological safety is positively related with speaking up (Edmondson & Lei, 2014; Newman et al., 2017; O'Donovan & McAuliffe, 2020). The third hypothesis proposes that as the feeling of psychological safety for speaking up increases, the relationship between social courage and speaking up for patient safety also increases. Sapra and Kumar (2020) discuss how the absence of psychological safety can decrease one's courage. Thus, the idea is that the presence of psychological safety can also increase courage. Courage is needed to speak up and may not take away the need of psychological safety (Edmondson, 2020). Especially for people lower in the medical hierarchy, speaking up for patient safety can be challenging (Martinez et al., 2015). The desire to be part of a team and fear of consequences may outweigh the courage required to speak up about safety concerns and unprofessional behavior (Liao et al., 2014). Psychological safety can facilitate and reinforce the decision to speak up (Bienefeld & Grote, 2014), creating an environment that makes people speak up as they believe that the benefits are greater than the costs (Edmondson, 2004).

Method

Procedure

First, the ethical approval was granted for this non-experimental study (Reference number: ECSW-LT-2023-5-19-32069). Then, all questionnaires and demographic questions were translated from English into Dutch by Radboud 'into Language. Afterwards, they were translated back into English by a Dutch/English speaker to make sure that the meaning did not get lost in translation (Tsang et al., 2017). Afterwards, the link to the Qualtrics online

questionnaire was posted on LinkedIn by various people with a healthcare network. Additionally, flyers were distributed within a hospital and e-mails were sent to various secretaries of different departments of different hospitals within the Netherlands. Data was collected for four weeks. Participation in the survey took around 10 minutes.

Participants

An a-priori power analysis was conducted using G*Power to determine the minimum sample size required to test the hypotheses of the current study. Results indicated the required sample size to achieve 80% power for detecting a medium effect, at a significance criterion of $\alpha = 0.05$ was $N = 77$ for the linear regression analysis.

The study recruited $N = 187$ participants out of which $N = 81$ participants fulfilled all inclusion criteria and finished the questionnaire. The obtained sample size of $N = 81$ is adequate to test the study hypotheses. The inclusion criteria to participate were to be at least 18 years old, working in a Dutch hospital, and have patient contact. Participation was voluntary and there was no reimbursement.

The demographics for all participants can be seen in Table 1.

Table 1

Demographic Characteristics of Participants

Characteristics	<i>n</i>	%
Gender		
Female	57	70.4
Male	24	29.6
Age		
18 – 29 years	22	27.2
30 – 39 years	20	24.7
40 – 49 years	14	17.3
50 – 59 years	14	17.3
60 – 69 years	11	13.6

Hospital type		
Academic hospital	71	87.7
Top clinical hospital	5	6.2
General hospital	2	2.5
Other	3	3.7
Function		
Medical specialist	14	17.3
Nurse	24	29.6
ANIOS/AIOS ¹	7	8.6
Student	7	8.6
Paramedical employee	16	19.8
Others	13	16.0
Tenure		
< 1 year	9	11.1
1 – 3 years	16	19.8
4 – 7 years	17	21.0
7 + years	39	48.1

Note. N = 81

Materials

To be able to participate in the study, participants had to read the information letter and agree to the consent form (Appendix A and B). To answer the research question, demographic questions about age, gender, first language, hospital type, job function, leading position, and tenure (Appendix C), and three questionnaires were administered. All questions were multiple choice questions.

First, the **independent variable** social courage was measured using the Workplace Social Courage Scale (WSCS; Howard et al., 2016; Appendix D). The 11 items were answered on a 7-point-likert-scale from “strongly disagree” to “strongly agree”. A high score indicated high social courage. An example item is “Although my co-worker may become

¹ ANIOS = Graduate doctor not in specialist training, AIOS = Graduate doctor in specialist training

offended, I would suggest to him/her better ways to do things.” The questionnaire had a Cronbach’s alpha of .77.

Second, to measure the **dependent variable**, the speaking up for patient safety questionnaire (speaking up for patient safety-Q; Appendix D) was used (Richard et al., 2021). The whole scale consisted of 11 items and its response options were “never” (0 times in the last 4 weeks), “rarely” (1–2 times), “sometimes” (3–5 times), “often” (6–10 times), and “very often” (more than 10 times in the last 4 weeks). It consisted of three subscales, namely perceived concern, withholding voice, and speaking up for patient safety. A high score indicated a high perceived concern, high withholding voice, and high speaking up. The speaking up for patient safety subscale consisted of four items. An example item would be “Over the past 4 weeks, how often did you bring up specific concerns about patient safety?”. The whole questionnaire had a Cronbach’s alpha of .88. The speaking up for patient safety subscale had a Chronbach’s alpha of .81.

To measure the **moderation variable** and **independent variable** psychological safety for speaking up, the psychological safety for speaking up questionnaire was applied (Richard et al., 2021; Appendix E). It consisted of 10 items and was answered on a 7-point-likert-scale from “strongly disagree” to “strongly agree”. Items 9 and 10 were reversed. The questionnaire consisted of three subscales: psychological safety for speaking up, encouraging environment for speaking up, and resignation toward speaking up. A high score indicated high psychological safety for speaking up, high encouraging environment for speaking up, and high resignation for speaking up. An example item would be “In my unit/clinical area, I observe others speaking up about their patient safety concerns.”. The whole questionnaire had a Cronbach’s alpha of .75. The psychological safety for speaking up subscale with its 5 items had a Cronbach’s alpha of .86.

This thesis is part of a larger project of the RadboudUMC Health Academy, therefore the Supervisor Support Questionnaire (Appendix F) by McGilton (2010) and four items of the

psychological safety questionnaire in healthcare teams (item 2,3,11,12) by O'Donovan et al. (2020) (Appendix E) were added additionally.

Data Analysis

All analyses were conducted using SPSS 28. For the data analysis, only participants with fully completed questionnaires were included. First, a mean score per participant was calculated for each variable, so psychological safety for speaking up, social courage, and speaking up for patient safety. A new variable for the interaction between social courage and psychological safety for speaking up was computed. Then, descriptives, frequencies, and the scales' reliability scores were calculated. Pearson's correlations were calculated to determine the correlation between social courage and speaking up for patient safety, between psychological safety for speaking up and speaking up for patient safety, and social courage and psychological safety for speaking up.

To establish whether there is an interaction effect between social courage and psychological safety for speaking up on speaking up for patient safety, a linear regression analysis was conducted. The main effects were again examined, this time controlling for the other variables. To check which possible confounders to control for, the "change-in-estimate" approach was used. This approach looks at whether the inclusion of a confounder changes the estimate of the main effect, by more than 10% (VanderWeele, 2019). If it does, it is included as a confounder. Each possible confounder, namely age, gender, function, and tenure was added separately into the regression analysis. Then, the effect size of each variable was compared to the effect size of social courage. Only function changed the effect size of social courage by more than 10%. Therefore, it was the only one included as a confounder. Function was recoded into a different variable, namely high (medical specialists, ANIOS/AIOS¹,

¹ ANIOS = Graduate doctor not in specialist training, AIOS = Graduate doctor in specialist training

paramedical employees) and low (nurses, students, others) functions. All assumptions for the linear regression analysis were checked (Appendix G). Then, the analysis was performed. After, outliers were checked by means of the boxplot and the cook's distance scores. The boxplot showed two potential outliers, but the results did not significantly change with or without those potential outliers. When reviewing the cook's distance values of each participant in the data set, there was no considerably higher value than the others. Therefore, no potential outliers were removed.

Results

Descriptives

In Table 2, the descriptives for perceived concern, speaking up for patient safety, psychological safety for speaking up, and social courage are displayed. The mean of perceived concern indicated that within the past four weeks participants experienced in average between 1 to 5 times worries, a mistake, or a colleague not following a rule which could endanger patient safety. Therefore, participants experienced situations in which they could have spoken-up.

Table 2

Psychometric Properties for the Investigated Variables and Perceived Concern

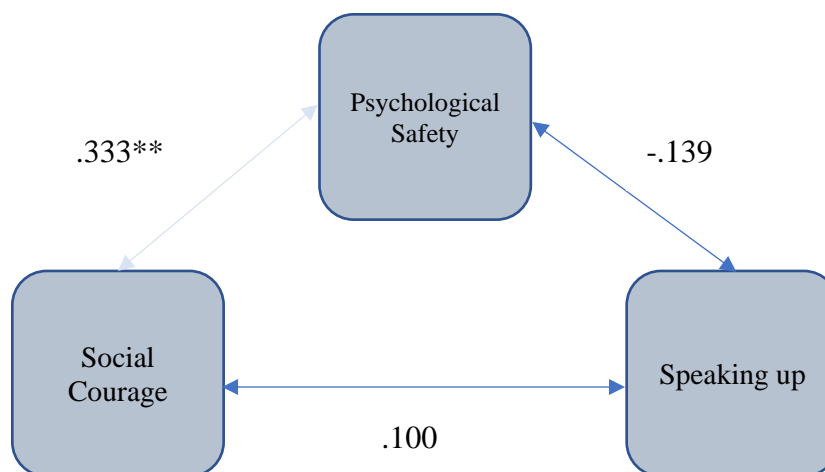
Scale/Subscales	M	SD	Range
Perceived Concern	2.7	0.9	3 - 15
Speaking up for patient safety	1.7	0.6	4 - 20
Psychological Safety for speaking up	5.7	0.8	5 - 35
Social Courage	5.3	0.7	11 - 77

Pearson's correlation

In Figure 1 the Pearson's correlation values between the three investigated variables can be seen. No significant correlation between psychological safety for speaking up and speaking up and social courage and speaking up was found. Although originally no hypothesis was formed about the relationship between social courage and psychological safety for speaking up, a positive significant correlation was found.

Figure 1

Pearson's Correlations Between the Investigated Variables



Note. Psychological safety = Psychological safety for speaking up, Speaking up = Speaking up for patient safety. Correlation without a priori hypothesis is shown with a grey line.

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

Linear Regression Analyses

To test the hypotheses a linear regression analysis was performed using social courage, psychological safety for speaking up, the interaction variable, and function as independent variables on speaking up for patient safety as the dependent variable. The assumptions of normality, homogeneity, linearity, interval data, and multicollinearity were all

met (Appendix G). The overall regression model was statistically significant ($R^2 = 0.16$, $F(4,80) = 3.60$, $p = .01$). However, no significant interaction effect nor significant main effect was found (Table 2). Thus, it cannot be assumed that either social courage or psychological safety for speaking up are related to speaking up for patient safety. It can also not be presumed that psychological safety for speaking up moderates the relationship between social courage and speaking up for patient safety.

Table 2

Regression coefficients of the linear regression analysis

Effect	Unstandardized B	SE	95% CI for B		p
			LL	UL	
Social Courage	.13	0.10	-0.07	3.13	.193
PS	-.14	0.08	-0.31	0.33	.082
Interaction	-.05	0.06	-0.18	0.07	.398

Note. SE = Coefficients std. error; LL = lower bound; UL = Upper bound; Dependent variable: speaking up for patient safety; PS = Psychological safety for speaking up; Interaction = Social courage * Psychological safety for speaking up; All effects were controlled for function.

Discussion

This research sought to examine the moderating effect of psychological safety for speaking up on the relationship between social courage and speaking up for patient safety in Dutch healthcare. The first hypothesis was that the higher the level of social courage, the higher the likelihood of speaking up for patient safety. No significant positive correlation was found. Thus, it cannot be assumed that the higher the level of social courage, the higher the likelihood of speaking up for patient safety in Dutch healthcare. The second hypothesis was that the higher the level of psychological safety for speaking up, the higher the likelihood of speaking up for patient safety. No significant positive correlation was found, therefore, one

cannot assume that the higher the level of psychological safety for speaking up, the higher the likelihood of speaking up for patient safety. The third hypothesis was that as the feeling of psychological safety for speaking up increases, the relationship between social courage and speaking up for patient safety also increases. No significant moderation effect was found, thus, as the feeling of psychological safety for speaking up increases, the relationship between social courage and speaking up for patient safety does not increase. Therefore, all hypotheses were rejected.

Social courage and speaking up for patient safety (H1)

The findings were not in line with the first hypothesis. Previous studies exploring courage playing a role in speaking up have used different approaches. For instance, Law and Chan (2015) conducted a qualitative research, which highlighted the necessity of courage, particularly moral courage, in increasing speaking up among newly graduated registered nurses. They took a qualitative and holistic approach, examining the reasons behind nurses' reluctance to speak up. In contrast, the present study quantitatively measured social courage and aimed to understand its relationship with the variables under investigation. These methodological differences may contribute to the disparity in results (Lakshman et al., 2000).

Although previous qualitative and quantitative research in different contexts have indicated that courage is required for speaking up (Howard et al., 2016; Law & Chan, 2015), the current study yielded different results. It could be due to a use of different samples and research methods. Additionally, it could be due to the difference in construct definition and motivation behind speaking up. Howard et al. (2016) identified a moderate correlation between the WSCS and employee voice, with the scale defining employee voice as constructive challenges to the status quo aimed at improving the situation (LePine & Van Dyne, 1998). Speaking up about patient safety is about the obligation to prevent errors reaching individual patients (Schwappach & Gehring, 2014) and the intention to prevent

avoidable harm to patients (Okuyama et al., 2014). These differences in motivation and construct definition may contribute to the variation in results.

Psychological safety for speaking up and speaking up for patient safety (H2)

Literature suggests that psychological safety facilitates speaking up and withholding voice, while a lack of psychological safety is related to silence (O'Donovan & McAuliffe, 2020). In the current study no significant association was found between psychological safety for speaking up and speaking up for patient safety. Schwappach (2018) explored the relationship between psychological safety for speaking up and the likelihood to speak up. Likelihood to speak up was assessed through a hypothetical speaking up scenario following four questions, one focusing on the likelihood to speak up. Schwappach and Niederhauser (2019) employed the same questionnaire to measure psychological safety for speaking up as the current study. The relationship between psychological safety and the likelihood to speak up was non-significant. Additionally, they had a negative coefficient, which, although also not significant, is the same in the current study and surprising. The negative coefficient being interpreted with caution, Newman et al. (2017) and Zhang and Wan (2021) have mentioned the possibility of negative aspects of psychological safety, which could be an interesting avenue for further investigation.

Most research finding a relation between psychological safety and speaking up utilized different questionnaires, like Edmondson's (1999) psychological safety questionnaire, or conducted qualitative research (O'Donovan & McAuliffe, 2020). However, Schwappach and Richard (2018) used the same questionnaires as the current study and also obtained significant results. However, in their cross-sectional survey conducted in Switzerland, they discovered a significant negative relationship between psychological safety for speaking up and speaking up for patient safety. Notably, their sample size was larger ($N = 979$), increasing statistical power and a likelihood of detecting true effects. Nevertheless, they adopted a different

approach compared to the current study, using a multilevel logistic regression, and treating speaking up for patient safety as a binary outcome variable. This may result in the loss of information by erasing subtle variations in responses, possible measurement errors, and the risk of bias in the analysis process. It also alters the interpretation of the effect size, hindering direct comparisons with the effect size of the current study. Furthermore, they predominantly included nurses (nearly 80%), with the remaining participants being doctors (nearly 20%). The current study incorporated a broader range of functions, speaking up as a continuous variable, but had lower statistical power due to its smaller sample size. In conclusion, the difference in how the outcome variable, analysis, and sample were considered may have led to the difference in results.

Schwappach and Richard (2018) observed a negative relation between psychological safety for speaking up and both speaking up and withholding voice. Higher psychological safety correlated to decreased speaking up and decreased withholding voice. Despite appearing as opposing behaviors, speaking up and withholding voice seem to be distinct constructs. Withholding voice involves intentionally refraining from sharing ideas, information, and opinions to improve patient safety (Schwappach & Richard, 2018). Participants may feel differently when responding to questions about withholding voice versus speaking up, especially if they choose intentionally to withhold their voice in urgent situations. This may carry a different connotation compared to situations where they simply have nothing to contribute. This bias may arise from individuals attempting to reconcile cognitive dissonance, caused by the conflict between recognizing the need to speak up for patient safety and personal hesitancy to do so. Participants may rationalize their non-speaking up behavior by convincing themselves that they would not intentionally choose to withhold their voice, thus avoiding the perception of intentional harm to the patient. Considering the distinction between speaking up and withholding voice as separate constructs is essential in future research to avoid unexpected findings.

Interaction (H3)

The last hypothesis which assumed that as psychological safety for speaking up increases, the relationship between social courage and speaking up for patient safety also increases, was not confirmed. It is possible that social courage can help establish psychological safety because people are more likely to speak up despite the consequences they may face. However, once psychological safety is high enough, the need for social courage may diminish because individuals already feel safe enough to speak up. While Edmondson (2020) highlights the necessity of courage for speaking up, it does not necessarily negate the need of psychological safety. Yet perhaps psychological safety mitigates the need for the use of social courage. Courage is associated with taking the first step in situations where outcomes are uncertain (Sapra & Kumar, 2020), and this may be particularly true when psychological safety is lacking.

At the same time, the absence of psychological safety is believed to decrease the courage invested in us, while the presence of psychological safety may enhance the courage invested in us (Sapra & Kumar, 2020). This significant positive correlation found in this research, contradicts the notion that courage is only required in the absence of psychological safety and aligns with the original hypothesis that psychological safety would increase the relationship between social courage and speaking up. Social courage involves taking risks that could harm one's reputation in the eyes of others (Howard et al., 2016). Although individuals may feel psychologically safer, speaking up can still feel risky (Edmondson, 2020). Yet, perhaps psychological safety might alleviate this fear in certain cases. Thus, when answering the questions of the current study, being socially courageous may no longer solely indicate social courage but rather feeling safe at one's workplace. This idea is supported by the relatively high scores observed for both constructs. If psychological safety does take away the need for social courage it would explain the missing interaction and its relationship with speaking up, as psychological safety was also not significantly related to speaking up. The

relationship between psychological safety and social courage has received limited research attention, highlighting the need for further investigation to gain a comprehensive understanding of their interplay.

Limitations & Strengths

An investigation of the limitations and strengths that may have contributed to the results is essential for a deeper understanding of their interpretations and to establish a solid foundation for future research efforts. There may have been a distributor bias during the dissemination of flyers, leading to a biased sample. It can affect the internal validity, leading to an inaccurate estimation of the variables' relationships, and affect the external validity, because it limits the generalizability to the population (Shringarpure, & Xing, 2014). Furthermore, the survey was sent to various secretaries in different departments. They either did not respond or forwarded it to other employees. This may have additionally led to a biased sample, with departments that did participate potentially already having a safer climate.

Initially, the sample was intended to consist solely of individuals from a specific surgery department. However, due to complications and time constraints, the sample population was expanded to Dutch hospital healthcare workers. This expansion may introduce limitations as prior research primarily focused on high-risk departments like surgery or emergency departments when studying speaking up and psychological safety. Notably, Edmondson et al. (2016) discovered a small yet significant disparity in psychological safety levels among different departments, with emergency departments, intensive care units, laboratories, and surgical departments exhibiting the lowest levels of psychological safety. Consequently, the results may vary across departments, but the lack of information on participants' specific departments prevents verification or control of potential departmental differences. Nevertheless, the inclusion of healthcare workers from various departments

allows for greater generalizability across the Dutch healthcare system, extending beyond high-risk departments. Additionally, it mitigates the chance of a possible selection bias.

The current study employed a cross-sectional design, which is suitable when the measured variables are stable over time (Kesmodel, 2018). However, it is important to note that the dynamics of psychological safety for speaking up and social courage over time are not well understood. While there have been longitudinal studies examining psychological safety as a mediator (Schulte et al., 2012), Newman et al. (2017) emphasize the need to investigate whether psychological safety undergoes changes over time. Given that psychological safety has mostly been studied qualitatively and by means of cross-sectional studies (Newman et al., 2017), no causality and only correlation can be assumed (Sassower, 2017). Therefore, to truly understand the direction and causal connection between psychological safety and other variables, conducting longitudinal studies is crucial. Examining the stability of psychological safety over time can contribute to a better understanding of the concept and facilitate the development of effective interventions to enhance psychological safety.

Future research

Research has revealed distinct outcomes for speaking up and withholding voice, indicating that they may represent separate constructs (Richard et al., 2021; Schwappach & Richard, 2018). The difference in results could potentially be attributed to efforts to resolve a cognitive dissonance (Alfnes et al., 2010) or individuals' tendency to exhibit biased self-perception characterized by overestimating themselves (John & Robins, 1994). To advance our understanding of these two concepts, future research should strive to further differentiate between them and investigate the underlying reasons for their divergent outcomes. This exploration may involve examining the distinct intentions associated with speaking up and withholding voice (Schwappach & Richard, 2018) or addressing potential issues in the conceptualization of these constructs within questionnaires.

The current study focused on social courage, which is a dimension of courage (Howard et al., 2016). This decision was based on the understanding that the desire to be part of a team and the fear of potential repercussions may outweigh the necessity for moral courage (Martinez et al., 2015). While qualitative research has shed light on the importance of courage in speaking up (Law & Chan, 2015; Sapra & Kumar, 2020), there has been relatively limited investigation into the concept of courage itself. It is well-known that individual factors influence the likelihood of speaking up (O'Donovan & McAuliffe, 2020) and increased speaking up behaviors have been shown to enhance healthcare outcomes and foster individual, team, and organizational learning (Newman et al., 2017; Okuyama et al., 2014). Therefore, future research could explore the relationship between psychological safety and the different dimensions of courage to gain a better understanding of their relationship.

Practical implications

Most findings of the current research have been yielding non-significant results, therefore when discussing the implications of possible interventions, past research will be additionally taken into account. The current research identified a significant correlation between social courage and psychological safety for speaking up. Past research has found that psychological safety is related to speaking up and to not withholding voice (Newman et al., 2017; O'Donovan & McAuliffe, 2020; Schwappach & Richard, 2018). Thus, the proposed implications will primarily focus on increasing social courage and psychological safety, under the assumption that they will reinforce each other, and psychological safety will enhance speaking up.

An approach to augment employees' psychological safety and social courage could be through the practice of leaders openly sharing their past mistakes during regular meetings, involving employees across all hierarchical levels. Leaders should endeavor to lead by example and act as role models, recognizing their capacity to influence the development of

courage among their followers through observational learning (Lester et al., 2010; Rosen et al., 2007). Witnessing role models speaking up and courageously facing potential challenges or consequences can demystify the process for other employees. Seeing that speaking up is not met with severe negative social repercussions, can reduce the fear and hesitancy associated with raising concerns, thus facilitating social courage and increasing psychological safety. Additionally, this approach can help to normalize mistakes and is of organizational benefit, as it contributes to a continuous learning process that nurtures a climate of openness, trust, and improvement (Silveira, 2021).

Especially, after leaders acted as role-models and cultivated a safer environment, lower-level employees can also share and act as role models to encourage others to do so (O'Donovan & McAuliffe, 2020). However, in moments of sharing mistakes, the leaders' reaction is of great importance (O'Donovan & McAuliffe, 2020). Also, transformational leaders have been shown to help increase employees' courage (O'Donovan & McAuliffe, 2020). Consequently, to enhance the necessary skills for appropriate reactions and to encourage leaders to adopt a more transformational leadership style and admit their mistakes, a "train the trainer" workshop should be considered as an additional component of the intervention (Hunt et al., 2021).

To have an effective intervention to increase social courage, psychological safety for speaking up, and speaking up for patient safety, a whole system approach must be adopted, targeting every level of an organization, namely individual, team, and organizational (Jones et al., 2021; Scott et al., 2003; Hunt et al., 2021). The meetings focus on increasing the individuals social courage and psychological safety, but also the psychological safety on a team level (Hunt et al., 2021). Therefore, the final part of the intervention focuses on the organizational level and the implementation of a code of conduct. This provides a framework for the hospital's behavioral expectations (Hunt et al., 2021). Codes of conduct help additionally to embed and reinforce desired behaviors and values into practice (Hunt et al.,

2021). Given that the intervention primarily relies on correlational studies, it is imperative for the hospitals' research institute to undertake an intervention study during its implementation to assess its efficacy.

Conclusion

To conclude this paper, the research only found a significant relationship between social courage and psychological safety. No significant relationship between social courage or psychological safety for speaking up with speaking up for patient safety was found. Also, psychological safety for speaking up was not significantly moderating the relationship between social courage and speaking up for patient safety. To increase speaking up in healthcare, interventions need to focus also on the individual level. Therefore, the relevance and importance of understanding individual factors that play a role in facilitating speaking up for patient safety and increasing psychological safety does not decrease. Additionally, exploring the concept of courage and the difference between speaking up and withholding voice is important to further optimize interventions. The proposed practical implication can contribute to establishing a supportive and safe environment where individuals feel encouraged to voice their concerns and suggestions, ultimately leading to improved patient safety and quality of care.

References

- Alfnes, F., Yue, C., & Jensen, H. H. (2010). Cognitive dissonance as a means of reducing hypothetical bias. *European Review of Agricultural Economics*, *37*(2), 147-163.
<https://doi.org/10.1093/erae/jbq012>
- Bienefeld, N., & Grote, G. (2014). Speaking up in ad hoc multiteam systems: Individual-level effects of psychological safety, status, and leadership within and across teams. *European Journal of Work and Organizational Psychology*, *23*(6), 930-945.
<https://doi.org/10.1080/1359432X.2013.808398>
- Cardiff, S., McCormack, B., & McCance, T. (2018). Person-centred leadership: A relational approach to leadership derived through action research. *Journal of Clinical Nursing*, *27*(15–16), 3056– 3069. <https://doi.org/10.1111/JOCN.14492>
- Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open? *Academy of Management Journal*, *50*(4), 869-884.
<https://doi.org/10.5465/amj.2007.26279183>
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, *44*(2), 350-383. <https://doi.org/10.2307/2666999>
- Edmondson, A. C. (2003). Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams. *Journal of Management Studies*, *40*(6), 1419-1452. <https://doi.org/10.1111/1467-6486.00386>
- Edmondson, A. C. (2004). Psychological Safety, Trust, and Learning in Organizations: A Group-Level Lens. In R. M. Kramer & K. S. Cook (Eds.), *Trust and distrust in organizations: Dilemmas and approaches* (pp. 239–272). Russell Sage Foundation.
<https://www.researchgate.net/>
- Edmondson, A. C. (2020). Foreword. In Hurt, K., & Dye, D., *Courageous cultures: How to build teams of micro-innovators, problem solvers, and customer advocates* (pp. xiv-xviii). HarperCollins Leadership.

- Edmondson, A. C., Higgins, M., Singer, S., & Weiner, J. (2016). Understanding psychological safety in health care and education organizations: a comparative perspective. *Research in Human Development, 13*(1), 65-83.
<https://doi.org/10.1080/15427609.2016.1141280>
- Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annu. Rev. Organ. Psychol. Organ. Behav., 1*(1), 23-43. <https://doi.org/10.1146/annurev-orgpsych-031413-091305>
- Howard, M. C., Farr, J. L., Grandey, A. A., & Gutworth, M. B. (2016). The creation of the workplace social courage scale (WSCS): An investigation of internal consistency, psychometric properties, validity, and utility. *Journal of Business and Psychology, 32*, 673-690. <https://doi.org/10.1007/s10869-016-9463-8>
- Hunt, D. F., Bailey, J., Lennox, B. R., Crofts, M., & Vincent, C. (2021). Enhancing psychological safety in mental health services. *International Journal of Mental Health Systems, 15*(1), 1-18. <https://doi.org/10.1186/s13033-021-00439-1>
- John, O. P., & Robins, R. W. (1994). Accuracy and bias in self-perception: individual differences in self-enhancement and the role of narcissism. *Journal of Personality and Social Psychology, 66*(1), 206-219. <https://doi.org/10.1037/0022-3514.66.1.206>
- Jones, A., Blake, J., Adams, M., Kelly, D., Mannion, R., & Maben, J. (2021). Interventions promoting employee “speaking up” within healthcare workplaces: A *Systematic Narrative Review of the International Literature. Health Policy, 125*(3), 375-384.
<https://doi.org/10.1016/j.healthpol.2020.12.016>
- Kesmodel, U. S. (2018). Cross-sectional studies—what are they good for? *Acta Obstetrica et Gynecologica Scandinavica, 97*(4), 388-393. <https://doi.org/10.1111/aogs.13331>
- Kessel, M., Kratzer, J., & Schultz, C. (2012). Psychological safety, knowledge sharing, and creative performance in healthcare teams. *Creativity and Innovation Management, 21*(2), 147-157. <https://doi.org/10.1111/j.1467-8691.2012.00635.x>

- Kish-Gephart, J. J., Detert, J. R., Treviño, L. K., & Edmondson, A. C. (2009). Silenced by fear: The nature, sources, and consequences of fear at work. *Research in Organizational Behavior*, 29, 163-193. <https://doi.org/10.1016/j.riob.2009.07.002>
- Lakshman, M., Sinha, L., Biswas, M., Charles, M., & Arora, N. K. (2000). Quantitative vs qualitative research methods. *The Indian Journal of Pediatrics*, 67, 369-377. <https://doi.org/10.1007/BF02820690>
- Law, B. Y. S., & Chan, E. A. (2015). The experience of learning to speak up: a narrative inquiry on newly graduated registered nurses. *Journal of Clinical Nursing*, 24(13-14), 1837-1848. <https://doi.org/10.1111/jocn.12805>
- LePine, J. A., & Van Dyne, L. (1998). Predicting voice behavior in work groups. *Journal of Applied Psychology*, 83(6), 853–868. <https://doi.org/10.1037/0021-9010.83.6.853>
- Lester, P. B., Vogelgesang, G. R., Hannah, S. T., & Kimmey, T., Jr. (2010). Developing courage in followers: Theoretical and applied perspectives. In C. L. S. Pury & S. J. Lopez (Eds.), *The psychology of courage: Modern research on an ancient virtue* (pp. 187–207). American Psychological Association. <https://doi.org/10.1037/12168-010>
- Liao, J. M., Thomas, E. J., & Bell, S. K. (2014). Speaking up about the dangers of the hidden curriculum. *Health Affairs*, 33(1), 168-171. <https://doi.org/10.1377/hlthaff.2013.1073>
- Martinez, W., Etchegaray, J. M., Thomas, E. J., Hickson, G. B., Lehmann, L. S., Schleyer, A. M., Best, J. A., Shelburne, J. T., May, M. B., & Bell, S. K. (2015). ‘Speaking up’ about patient safety concerns and unprofessional behaviour among residents: validation of two scales. *BMJ Quality & Safety*, 24(11), 671-680. <http://dx.doi.org/10.1136/bmjqs-2015-004253>
- McGilton, K. S. (2010). Development and psychometric testing of the supportive supervisory scale. *Journal of Nursing Scholarship*, 42(2), 223-232. <https://doi.org/10.1111/j.1547-5069.2009.01323.x>

- Mickan, S., & Rodger, S. (2000). Characteristics of effective teams: a literature review. *Australian Health Review*, 23(3), 201-208. <https://doi.org/10.1071/AH000201>
- Morrow, K. J., Gustavson, A. M., & Jones, J. (2016). Speaking up behaviours (safety voices) of healthcare workers: a metasynthesis of qualitative research studies. *International Journal of Nursing Studies*, 64, 42-51. <https://doi.org/10.1016/j.ijnurstu.2016.09.014>
- Nembhard, I. M., & Edmondson, A. C. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 27(7), 941-966. <https://doi.org/10.1002/job.413>
- Newman, A., Donohue, R., & Eva, N. (2017). Psychological safety: A systematic review of the literature. *Human Resource Management Review*, 27(3), 521-535. <https://doi.org/10.1016/j.hrmr.2017.01.001>
- O'Donovan, R., & McAuliffe, E. (2020). A systematic review exploring the content and outcomes of interventions to improve psychological safety, speaking up and voice behaviour. *BMC Health Services Research*, 20(1), 1-11. <https://doi.org/10.1186/s12913-020-4931-2>
- O'Donovan, R., Van Dun, D., & McAuliffe, E. (2020). Measuring psychological safety in healthcare teams: developing an observational measure to complement survey methods. *BMC Medical Research Methodology*, 20, 1-17. <https://doi.org/10.1186/s12874-020-01066-z>
- Okuyama, A., Wagner, C., & Bijnen, B. (2014). Speaking up for patient safety by hospital-based health care professionals: a literature review. *BMC Health Services Research*, 14(1), 1-8. <https://doi.org/10.1186/1472-6963-14-61>

- Peadon, R., Hurley, J., & Hutchinson, M. (2020). Hierarchy and medical error: Speaking up when witnessing an error. *Safety Science, 125*, 104648.
<https://doi.org/10.1016/j.ssci.2020.104648>
- Richard, A., Pfeiffer, Y., & Schwappach, D. D. (2021). Development and psychometric evaluation of the speaking up about patient safety questionnaire. *Journal of Patient Safety, 17*(7), e599-e606. <https://doi.org/10.1097/PTS.0000000000000415>
- Rosen, B., Furst, S., & Blackburn, R. (2007). Overcoming barriers to knowledge sharing in virtual teams. *Organizational Dynamics, 36*(3), 259-273.
<http://dx.doi.org/10.1016/j.orgdyn.2007.04.007>
- Sapra, J., & Kumar, B. (2020). Inter-relation of psychological safety, courage and vulnerability in the workplace. *International Journal of Engineering, Applied Sciences and Technology, 5*(3), 562-567. <http://dx.doi.org/10.33564/IJEAST.2020.v05i03.096>
- Sassower, R. (2017). Causality and correlation. *The Wiley-Blackwell Encyclopedia of Social Theory, 18*(9), 1-4. <https://doi.org/10.1002/9781118430873.est0585>
- Schulte, M., Cohen, N. A., & Klein, K. J. (2012). The coevolution of network ties and perceptions of team psychological safety. *Organization Science, 23*(2), 564-581.
<https://doi.org/10.1287/orsc.1100.0582>
- Schwappach, D. L. (2018). Speaking up about hand hygiene failures: A vignette survey study among healthcare professionals. *American Journal of Infection Control, 46*(8), 870-875. <https://doi.org/10.1016/j.ajic.2018.02.026>
- Schwappach, D. L., & Gehring, K. (2014). Trade-offs between voice and silence: a qualitative exploration of oncology staff's decisions to speak up about safety concerns. *BMC Health Services Research, 14*, 1-10. <https://doi.org/10.1186/1472-6963-14-303>
- Schwappach, D. L., & Niederhauser, A. (2019). Speaking up about patient safety in psychiatric hospitals—a cross-sectional survey study among healthcare

- staff. *International Journal of Mental Health Nursing*, 28(6), 1363-1373.
<https://doi.org/10.1111/inm.12664>
- Schwappach, D., & Richard, A. (2018). Speak up-related climate and its association with healthcare workers' speaking up and withholding voice behaviours: a cross-sectional survey in Switzerland. *BMJ Quality & Safety*, 27(10), 827-835.
<http://dx.doi.org/10.1136/bmjqs-2017-007388>
- Scott, T. I. M., Mannion, R., Davies, H. T., & Marshall, M. N. (2003). Implementing culture change in health care: theory and practice. *International Journal for Quality in Health Care*, 15(2), 111-118. <https://doi.org/10.1093/intqhc/mzg021>
- Shringarpure, S., & Xing, E. P. (2014). Effects of sample selection bias on the accuracy of population structure and ancestry inference. *G3: Genes, Genomes, Genetics*, 4(5), 901-911. <https://doi.org/10.1534%2Fg3.113.007633>
- Silveira Jr, A. S. (2021). Learning from Mistakes. In *Building and Managing High-Performance Distributed Teams: Navigating the Future of Work* (pp. 181-192). Berkeley, CA: Apress. https://doi.org/10.1007/978-1-4842-7055-4_15
- Tsang, S., Royse, C. F., & Terkawi, A. S. (2017). Guidelines for developing, translating, and validating a questionnaire in perioperative and pain medicine. *Saudi Journal of Anaesthesia*, 11(Suppl 1), S80. https://doi.org/10.4103%2Fsja.SJA_203_17
- Tucker, S., Chmiel, N., Turner, N., Hershcovis, M. S., & Stride, C. B. (2008). Perceived organizational support for safety and employee safety voice: the mediating role of coworker support for safety. *Journal of Occupational Health Psychology*, 13(4), 319-330. <https://psycnet.apa.org/doi/10.1037/1076-8998.13.4.319>
- VanderWeele, T. J. (2019). Principles of confounder selection. *European journal of epidemiology*, 34(3), 211-219. <https://doi.org/10.1007/s10654-019-00494-6>

Zhang, Y., & Wan, M. (2021). The double-edged sword effect of psychological safety climate: a theoretical framework. *Team Performance Management: An International Journal*, 27(5/6), 377-390. <https://doi.org/10.1108/TPM-01-2021-0005>

Appendix A

Information Letter

Informatiebrief

Voor deelname aan wetenschappelijk onderzoek: Het verband tussen sociale moed en spreken voor patiëntveiligheid gemodereerd door psychologische veiligheid

1a. Inleiding

Dit onderzoek wordt uitgevoerd door Louise Bernadet, masterstudent 'Work, Organization, and Health Psychology' aan de Radboud Universiteit. In het kader van mijn studie loop ik stage bij de RadboudUMC Health Academy (RHA) en werk ik aan mijn masterscriptie onder begeleiding van een docent van de Radboud Universiteit en RHA-medewerker prof.dr. Lia Fluit. Dit onderzoek gaat over psychologische veiligheid, sociale moed en het opkomen voor patiëntveiligheid en is bedoeld om een brug te slaan tussen wetenschap en praktijk. Voor deze thesis wordt elke Nederlandse zorgprofessionnal die met patiënten werkt uitgenodigd om deel te nemen. Met de kennis die we hiermee opdoen kunnen we (RadboudUMC Health Academy) het leren en opleiden in de praktijk verder optimaliseren.

1b. Onderzoek

Je openlijk uitspreken over patientveiligheid is van het grootste belang, maar houdt ook vaak een risico in waardoor mensen zwijgen. Daarom zal deze studie nagaan of de sociale moed van individuen - het nemen van risico's die de reputatie in de ogen van anderen kunnen schaden - gerelateerd is aan het spreken voor patiëntveiligheid. Bovendien zal deze studie nagaan of psychologische veiligheid - individuen die de overtuiging delen dat het nemen van

interpersoonlijke risico's veilig is - de relatie tussen sociale moed en spreken voor patiëntveiligheid modereert. Het doel van deze studie is om potentiële factoren te vinden die correleren met je uitspreken voor patiëntveiligheid en psychologische veiligheid om zo potentiële interventies te ontwikkelen om de patiëntveiligheid en psychologische veiligheid in de Nederlandse gezondheidszorg te vergroten.

Psychologische veiligheid, sociale moed, opkomen voor patiëntveiligheid en steun van de supervisor zullen worden gemeten aan de hand van gesloten vragen. De specifieke instructies voor het geven van de antwoorden vindt u aan het begin van elke vragenlijst. Het invullen van de vragenlijst duurt ongeveer 10-15 minuten.

Het onderzoek heeft een minimaal risico en voldoet aan de ethische kaders van het "Light Track" zoals opgesteld door de Commissie Ethiek Sociale Wetenschappen (ECSS) van de Radboud Universiteit. De onderzoeker(s) heeft/hebben dit vastgesteld door het invullen van de checklist behorende bij het Light Track.

2. Privacy

2a. Vertrouwelijkheid van uw gegevens en gegevensverwerking

De informatie die u verstrekt voor de huidige onderzoeksdoeleinden wordt met de grootste zorg behandeld en is alleen toegankelijk voor bevoegde onderzoekers en bevoegde instanties.

De informatie die wij verzamelen wordt anoniem verwerkt. Dit betekent dat de resultaten later niet tot u te herleiden zijn. Het gevolg hiervan is dat wij u na afloop van het onderzoek niet kunnen informeren over uw persoonlijke resultaten. Wel kunnen wij u informeren over de resultaten van het onderzoek als geheel.

Indien u geïnformeerd wenst te worden over de resultaten van dit onderzoek, laat het mij dan weten en neem contact met mij op via louise.bernadet@ru.nl.

2b. Bewaartermijn van de gegevens

Het door u ondertekende toestemmingsformulier wordt na afronding van het onderzoek 10 jaar bewaard. Uw geanonimiseerde onderzoeksgegevens worden tot 10 jaar na afronding van het onderzoek bewaard.

2c. Recht op toegang door toezichthoudende autoriteiten om te controleren of het onderzoek voldoet aan de richtlijnen van de regelgeving

Sommige personen en organisaties moeten toegang hebben tot uw persoons- en onderzoeksgegevens. Dit is nodig om te toetsen of het onderzoek goed en betrouwbaar is uitgevoerd. Deze personen en toezichthouders die uw gegevens ter controle inzien zijn onder andere: geautoriseerde personen binnen de Radboud Universiteit, (inter)nationale toezichthouders (bijvoorbeeld het College Bescherming Persoonsgegevens en het College Onderzoek Integriteit). Zij zijn gehouden tot inzage in de anonieme gegevens op strikt vertrouwelijke basis. U wordt gevraagd toestemming te geven voor deze inzage. Weigert u dit, dan kunt u niet deelnemen aan het onderzoek.

3. Bevindingen die van persoonlijk klinisch belang kunnen zijn

De verkregen onderzoeksgegevens zullen niet vanuit een medisch en/of klinisch perspectief worden bekeken. Daarom kan uw deelname aan het onderzoek niet worden beschouwd als een medische/klinische test. Aangezien het huidige onderzoek volledig anoniem is, kunnen eventuele scores die zorgwekkend zijn en/of van persoonlijk klinisch belang kunnen zijn, niet aan u worden gerelateerd. Indien u zich naar aanleiding van de vragen zorgen maakt over uw

gezondheid, adviseren wij u contact op te nemen met uw huisarts.

4. Vrijwillige deelname

Uw deelname aan dit onderzoek is geheel vrijwillig. Als u besluit niet deel te nemen, heeft dat geen gevolgen. Als u in de loop van het onderzoek uw toestemming wilt intrekken en uw deelname wilt beëindigen, heeft u daartoe te allen tijde het volste recht. Ook hier zullen geen nadelige gevolgen voor u aan verbonden zijn.

5. Contactinformatie

Als u vragen, opmerkingen of zorgen heeft over dit onderzoek, kunt u contact opnemen met de onderzoeker die verantwoordelijk is voor het Masterproject: Louise Bernadet (louise.bernadet@ru.nl).

Met vriendelijke groet,

Louise Bernadet

louise.bernadet@ru.nl

Student Master Project

Opleiding Arbeids-, Organisatie- en Gezondheidspsychologie Radboud Universiteit

Prof. Dr. Lia Fluit

lia.fluit@radboudumc.nl

Radboudumc Health Academy

Appendix B

Consent Form

Toestemmingsformulier

Voor deelname aan wetenschappelijk onderzoek: Het verband tussen sociale moed en spreken voor patiëntveiligheid gemodereerd door psychologische veiligheid

Hierbij bevestig ik dat:

- Ik ben naar tevredenheid schriftelijk geïnformeerd over het onderzoek;
- Ik de schriftelijke informatie heb gelezen
- Ik ben in de gelegenheid gesteld vragen te stellen over het onderzoek;
- Mijn vragen naar tevredenheid zijn beantwoord;
- Ik heb voldoende gelegenheid gekregen om goed na te denken over deelname aan het onderzoek;
- Ik neem geheel vrijwillig deel aan het onderzoek.

Ik begrijp dat:

- Ik het recht heb mijn toestemming te allen tijde zonder opgave van redenen en zonder vrees voor nadelige gevolgen in te trekken door contact op te nemen met Louise Bernadet via louise.bernadet@ru.nl.

Ondergetekende verklaart hierbij dat bovengenoemde persoon schriftelijk is geïnformeerd over bovengenoemd onderzoek.

Louise Bernadet

Prof. Dr. Lia Fluit

Appendix C

Demographical Questions

1. Tot welke leeftijdsgroep behoort u?

- a. 18 – 29
- b. 30 – 39
- c. 40 – 49
- d. 50 – 59
- e. 60 – 69

2. Welke gender identiteit heeft u?

- a. Vrouw
- b. Man
- c. Anders

3. Wat is uw moedertaal?

- a. Nederlands
- b. Duits
- c. Anders

4. Werkt u in Nederland?

- a. Ja
- b. Nee

5. Werkt u als zorgprofessional in het ziekenhuis?

- a. Ja
- b. Nee

6. Werkt u samen met patiënten?

- a. Ja
- b. Nee

7. In wat voor soort ziekenhuis werkt u?

- a. Academisch ziekenhuis
- b. Topklinisch ziekenhuis
- c. Algemeen ziekenhuis
- d. Anders

8. Wat is uw functie?

- a. Medisch specialist
- b. Verpleegkundige
- c. ANIOS/AIOS
- d. Student (Verpleegkunde, Geneeskunde of anders)
- e. Paramedische Medewerker
- f. Anders

9. Heft u een leidinggevende functie?

- a. Ja
- b. Nee

10. Hoeveel jaar hebt u tot nu toe in totaal op de afdeling Heelkunde van het Radboudumc gewerkt?

- a. <1 jaar
- b. 1 – 3 jaar
- c. 4 – 7 jaar
- d. 7 + jaar

Appendix D

Workplace Social Courage Scale (WSCS) (Howard et al., 2016)

Antwoordopties:

1 = Zeer mee oneens; 2 = Mee oneens; 3 = Enigszins mee oneens; 4 = Neutraal; 5 = Enigszins mee eens; 6 = Mee eens; 7 = Zeer mee eens

Interacties op de werkplek kunnen veel risico's met zich meebrengen. Deze risico's kunnen variëren van klein tot ernstig, afhankelijk van het gedrag. Geef bij onderstaande beweringen aan in hoeverre u het volgende gedrag zou laten zien, ondanks de risico's die daaraan verbonden zijn. Gebruik onderstaande schaal:

Beantwoord deze vragen NIET met u huidige functie of werkgroep in gedachten. Beantwoord de vragen op basis van hoe u zou handelen als u vijf jaar op een werkplek zou hebben gewerkt.

1. Hoewel het onze vriendschap zou kunnen schaden, zou ik het mijn leidinggevende toch vertellen als een collega iets verkeerd doet.
2. Hoewel mijn collega zich beledigd zou kunnen voelen, zou ik hem/haar toch erop wijzen hoe hij/zij dingen beter kan doen.
3. Als ik vind dat iets een domme vraag is, zou ik de vraag toch stellen als ik iets op het werk niet begrijp.
4. Zelfs als mijn collega's minder positief over me zouden denken, dan zou ik toch leidinggeven aan een project dat mogelijk mislukt.
5. Ik zou het niet tolereren dat een collega onbeleefd tegen iemand is, ook niet als ik hem/haar daardoor overstuur maak.

6. Ook al vindt mijn ondergeschikte het niet aardig van mij, ik zeg het toch tegen hem/haar wanneer hij/zij iets doet wat tegen het bedrijfsbeleid ingaat.
7. Ik zou het mijn collega's laten weten als ik me ergens zorgen om maak, ook als ze me daarom te negatief zouden vinden.
8. Zelfs als het onze relatie zou schaden, zou ik de confrontatie aangaan met een ondergeschikte die het teamwerk heeft verstoord.
9. Ook al kom ik incompetent over, ik zou het mijn collega's vertellen als ik een fout heb gemaakt.
10. Zelfs als ik misschien dom overkom op de toehoorders, zou ik me vrijwillig aanmelden om een presentatie te houden op het werk.
11. Ook al zou het onze vriendschap volledig stukmaken, dan nog zou ik een collega een eerlijke beoordeling geven.

Appendix D

Psychological Safety for Speaking up (Richard et al., 2021)

Antwoordopties:

1 = Zeer mee oneens; 2 = Mee oneens; 3 = Enigszins mee oneens; 4 = Neutraal; 5 = Enigszins mee eens; 6 = Mee eens; 7 = Zeer mee eens

Volgende Vragen gaan over de role van supervisor en leidinggevende en het creeren van psychologische veiligheid.

O'Donovan, & McAuliffe, 2020:

1. Ik kan mijn mening over kwesties op het werk bespreken met mijn leidinggevende.
2. Ik kan persoonlijke problemen of onenigheden bespreken met mijn teamleider.
3. Ik kan mijn mening over kwesties op het werk bespreken met mijn collega's.
4. Ik kan persoonlijke problemen bespreken met mijn collega's.

Richard et al., 2021:

Psychological safety for speaking up

5. Ik kan altijd vertrouwen op mijn collega's (artsen en/of verpleegkundigen) als ik tegen problemen aanloop in mijn werk.
6. Ik kan terugvallen op mijn teamleider (degene die de leiding heeft tijdens een dienst) als ik tegen problemen aanloop in mijn werk.
7. De cultuur in mijn eenheid/klinische afdeling maakt het makkelijk om zorgen over patiëntveiligheid uit te spreken.
8. Mijn collega's (artsen en/of verpleegkundigen) reageren op een passende manier als ik mijn zorgen over patiëntveiligheid uitspreek.

9. Mijn teamleider (degene die de leiding heeft tijdens een dienst) reageert op een passende manier als ik mijn zorgen over patiëntveiligheid uitspreek.

Encouraging environment for speaking up

10. In mijn eenheid/klinische afdeling zie ik dat anderen zich uitspreken als ze zorgen hebben over patiëntveiligheid.

11. Mijn collega's (artsen en/of verpleegkundigen) moedigen me aan om zorgen over patiëntveiligheid uit te spreken.

12. Mijn teamleider (degene die de leiding heeft tijdens een dienst) moedigt me aan om zorgen over patiëntveiligheid uit te spreken.

Resignation toward speaking up

13. Het is frustrerend om medewerkers telkens weer op dezelfde veiligheidsregels te moeten wijzen!

14. Soms word ik moedeloos omdat er niets verandert als ik mijn zorgen over patiëntveiligheid heb geuit.

Appendix E

Speaking up for Patient Safety (Richard et al., 2021)

Antwoordopties:

1 = Nooit (0 keer in de afgelopen 4 weken); 2= Zelden (1–2 keer); 3= Soms (3–5 keer); 4 = Vaak (6–10 keer); 5 = Erg vaak (meer dan 10 keer in de afgelopen 4 weken)

In het dagelijks werk gaan soms dingen mis en ontstaan er risico's voor patiënten. Dat kan het gevolg zijn van bijvoorbeeld een medicatiefout, slechte handhygiëne of ontbrekende documentatie. Hoe vaak hebt u in de afgelopen 4 weken...

Perceived concerns

1. ... specifieke zorgen gehad over patiëntveiligheid?
2. ... een fout opgemerkt die – als deze niet wordt ondervangen – schadelijk voor patiënten zou kunnen zijn?
3. ... opgemerkt dat uw collega's op de werkplek belangrijke regels voor patiëntveiligheid niet hebben opgevolgd, bedoeld of onbedoeld?

Withholding voice

4. ... ervoor gekozen uw specifieke zorgen over patiëntveiligheid niet ter sprake te brengen?
5. ... ideeën voor het verbeteren van de patiëntveiligheid in uw eenheid voor uzelf gehouden?
6. ... gezwegen, terwijl u over informatie beschikte die een veiligheidsincident in uw eenheid had kunnen voorkomen?
7. ... een collega (arts en/of verpleegkundige) er niet op aangesproken wanneer hij/zij belangrijke regels voor patiëntveiligheid niet opvolgde, bedoeld of onbedoeld?

Speaking up

8. ... specifieke zorgen over patiëntveiligheid ter sprake gebracht?
9. ... een fout hersteld die – als deze niet was opgemerkt – schadelijk voor patiënten zou kunnen zijn geweest?
10. ... een collega (arts en/of verpleegkundige) erop aangesproken dat hij/zij belangrijke regels voor patiëntveiligheid niet had opgevolgd, bedoeld of onbedoeld?
11. ... een incident voorkomen doordat u specifieke zorgen over patiëntveiligheid ter sprake hebt gebracht?

Appendix F

Supervisor Support (McGilton, 2010)

Antwoordopties:

1 = Nooit; 2 = Zelden; 3 = Soms; 4 = Vaak; 5 = Altijd

1. Mijn leidinggevende erkent dat ik goede zorg kan leveren.
2. Mijn leidinggevende probeert aan mijn behoeften te voldoen.
3. Mijn leidinggevende kent me goed genoeg om te weten wanneer ik me zorgen maak over de zorg voor patiënten.
4. Mijn leidinggevende probeert mijn standpunt te begrijpen als ik in gesprek ben met hem/haar.
5. Mijn leidinggevende komt aan mijn behoeften tegemoet door me bijvoorbeeld te vertellen wat er van me wordt verwacht als ik met de patiënten werk.
6. Ik kan op mijn leidinggevende vertrouwen als ik om hulp vraag, bijvoorbeeld als er dingen niet goed gaan tussen mijzelf en mijn collega's of tussen mijzelf en patiënten en/of hun familie.
7. Mijn leidinggevende houdt me op de hoogte van alle belangrijke veranderingen in de werkomgeving of organisatie.
8. Ik kan erop vertrouwen dat mijn leidinggevende openstaat voor alle opmerkingen die ik tegen hem/haar maak.
9. Mijn leidinggevende houdt me op de hoogte van alle beslissingen die te maken hebben met de bewoners voor wie ik zorg.
10. Mijn leidinggevende weet de juiste balans te vinden tussen de zorgen van patiënten/familie en mijn eigen zorgen.
11. Mijn leidinggevende moedigt me aan, zelfs in moeilijke situaties.

12. Mijn leidinggevende laat altijd zijn/haar waardering blijken als ik goed werk lever.

13. Mijn leidinggevende respecteert mij als persoon.

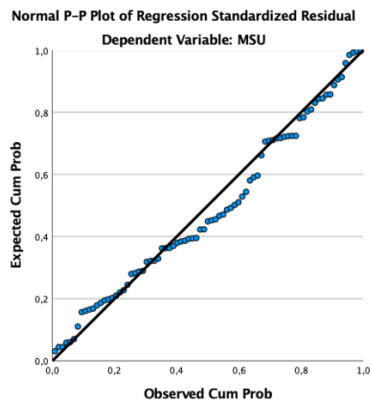
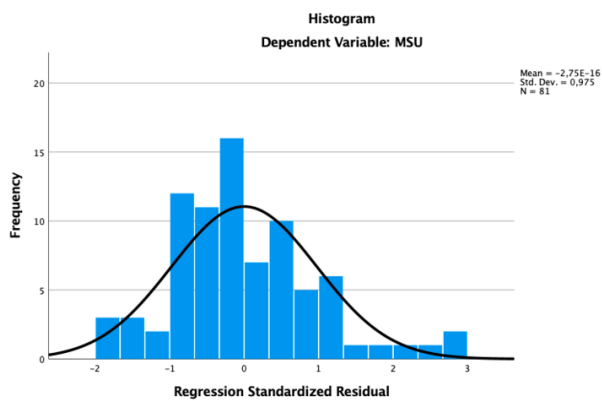
14. Mijn leidinggevende neemt de tijd om naar me te luisteren.

Appendix G

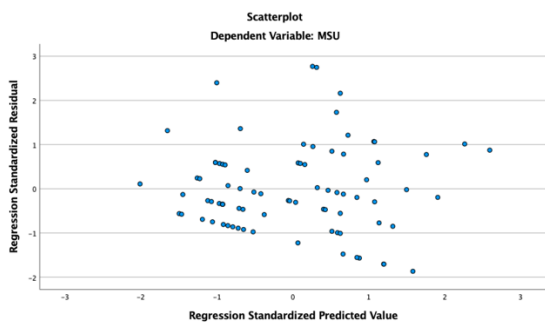
Assumptions

$N = 81$

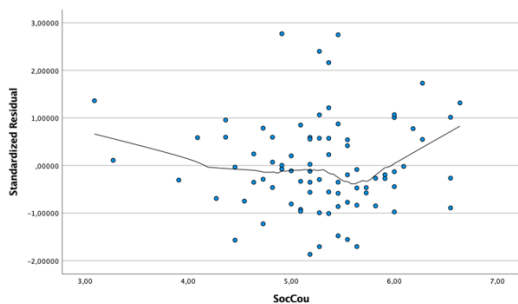
Normality:



Homogeneity:



Linearity:



Multicollinearity:

		Collinearity Statistics	
Model		Tolerance	VIF
1	SocCou	,887	1,128
	PS	,881	1,135
	Interaction	,976	1,024
	Functionhighlow	,980	1,021