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Fostering Psychological Safety in Teachers: The Role of School Leadership, Team Effectiveness & Organizational Culture

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Fostering Psychological Safety in Teachers: The Role of School Leadership, Team Effectiveness & Organizational Culture

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Abstract

Psychological Safety is one of the most important conditions for team learning and has also been tied to improved organizational outcomes. The present study is an attempt to explore the influence of school leadership's task and relations-oriented behavior, leadership styles, and the schools' organizational culture on teachers' psychological safety. The study further analyzed the moderating role of team effectiveness on the relationship between leadership behavior and psychological safety. A survey was conducted using questionnaires gathering data from 600 secondary school teachers from 46 private schools, from urban Islamabad, Pakistan. The findings indicated a strong effect of leadership task-oriented and relation-oriented behavior and the teachers' psychological safety with team effectiveness as a significant moderator as well as a predictor of psychological safety. Further analysis showed that a collaborative and cultivating school culture has higher levels of teachers' psychological safety. Therefore, school administration may consciously develop a collaborative and innovation-oriented school culture and disseminate it through Team Leadership style which is oriented towards the teachers as well as the achievement of organizational goals. The theoretical contribution of this research is examining the construct of psychological safety amongst school teachers in relation to antecedents at organization and team level.

Fomentar la seguridad psicológica en los docentes: la parte del liderazgo escolar, la efectividad del equipo y la cultura organizacional

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Resumen

La seguridad psicológica es una de las condiciones más importantes para el aprendizaje en equipo y también se ha relacionado con mejores resultados organizacionales. El presente estudio es un intento de explorar la influencia de liderazgo y su comportamiento orientado a las relaciones y los objetivos de organización, el estilo de liderazgo y la cultura organizacional de las escuelas sobre la seguridad psicológica de los maestros. El estudio analizó además el parte moderador de la efectividad del equipo en la relación entre el comportamiento de liderazgo y la seguridad psicológica. Para lograr este propósito, se realizó una encuesta utilizando cuestionarios que recopilaron datos de 600 maestros de secundaria de 46 escuelas privadas de la zona urbana de Islamabad, Pakistán. Los hallazgos indicaron una fuerte asociación entre el comportamiento orientado a las tareas de liderazgo y las relaciones y la seguridad psicológica de los maestros con la efectividad del equipo como moderador significativo y como predictor de la seguridad psicológica. El análisis mostró que una cultura escolar colaborativa y cultivadora tiene niveles más altos de seguridad psicológica de los maestros. La administración debe desarrollar conscientemente una cultura colaborativa y orientada a la innovación y difundirla a través del estilo liderazgo de equipo que esté orientado hacia los maestros y el logro de los objetivos de la organización. La contribución teórica de esta investigación sería examinar la construcción de la seguridad psicológica entre los maestros de escuela en relación con los antecedentes a nivel de organización y equipo.

Palabras clave: seguridad psicológica, liderazgo, cultura organizacional

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Psychological safety has emerged as a prominent construct having implications at different levels of an organization. Edmondson (1999) defined our variable of interest as a "feeling" that allows team members to take risk without fear of a negative outcome. Constructs similar in nature to psychological safety in existing literature have been delineated by Frazier et al. (2017) to include work engagement (Kahn, 1990); trust (Edmondson, 2004) and psychological empowerment (Spreitzer, 1995). Educational research has not yet examined extensively or intensively the factors contributing to the psychological safety of teachers and the outcomes of high psychological safety for team performance or school effectiveness, which is actually an area worthy of being explored since schooling, teaching and education in general demands and benefits from creativity and innovation of the teachers.

Teachers spend a major portion of their day in schools, interacting with school management, team members and the students all the while performing a variety of functions that drive the school towards achievement of its objectives. The teacher's role in the school is expanding as we move towards espousing a shared or distributed leadership framework. Leadership functions cannot be arguably limited to a single individual, in a formal leadership position, if the school is to be effectively led towards improvement. (Spillane et al., 2001), (Lambert, 2002). Furthermore, with the widespread acclaim of Peter Senge's (1990) learning organization theory schools as well as corporate organizations must reconceptualize themselves as "learning organizations" in order to meet the demands of the rapidly changing world. (Kools et al., 2020). As a result of the aforementioned paradigm shifts, teachers are expected to collaborate more frequently, work in teams and perform a range of administrative functions with an increased involvement in decision-making for whole-school reform and innovation.   In this process, inter-personal risks are unavoidable as team members must have the trust that their ideas, suggestions for taking risks, or amending an original plan would not be met with criticism or punishment by the team or principal. (Detert & Burris, 2007). This feeling of safety in work teams is known as psychological safety. (Edmondson, 1999; Kahn, 1990).

Drawing from the social exchange theory, which guided the conceptualization of the study and the hypothesized relationship between the variables, the study has also undertaken a behavioral approach to leadership as well as to psychological safety, which manifests itself in the team's learning behavior. To explore the antecedents of psychological safety of teachers, we have investigated the effect of the dichotomy of leadership behavior: task-oriented behavior and relations-oriented behavior on psychological safety of teachers. To examine the boundary conditions of leadership behavior's effect on psychological safety, team effectiveness was investigated as a moderator of the aforementioned relationship. The dichotomy of leadership behavior translates into four leadership styles namely Authoritarian, Impoverished, Country Club and Team leadership. These leadership styles were examined in relation to psychological safety. Furthermore, the difference in psychological safety of teachers was also examined, based on different types of organizational cultures, and the prediction of psychological safety by team effectiveness which entails the dimensions of goal clarity, role clarity, team processes and inter-personal relationships.

The literature would be strengthened by examining teachers' psychological safety in relation to organizational factors, which may be tied to a school organization's ability to engage all members in purposeful, sustained learning to improve educational practice. The major contribution of this research would be to examine the construct of psychological safety amongst schoolteachers in relation to antecedents at organization and team level. This study also aims to bridge the gap in psychological safety research, identified by Newman & al. (2017), calling to examine the role of culture in fostering psychological safety and investigating psychological safety by conducting multi-level relative influence of individual, team and organizational antecedents of psychological safety.

Objectives of the Study

1. To investigate the effects of organizational factors and team factors on school teachers' psychological safety.
2. To find out the moderating role of team effectiveness on the relation between leadership behavior and teachers' psychological safety.

Review of Literature

The study is grounded in social exchange theory which views social behavior as an outcome of a cost-benefit analysis in the individual's mind. In organizational behavior theory, social exchange theory is a prominent paradigm which explains how employees decide to behave based on their perception of the organizational factors such as leadership and the culture of the organization. Their innovative work behavior would be an outcome of their perceptions of the nature of social transactions with the organization and the perceived risk in the outcome of their behavior. This risk-analysis is at a cognitive/affective level and the team members decide whether to engage or disengage based on their perception of the risks associated with their behavior. In the context of our study, leadership behavior, team effectiveness and organizational culture are transacting with psychological safety of the employees (Shapiro et al., 2005). Teachers make the decision to engage in innovative behaviour or taking inter-personal risks in the team if they perceive the outcome of their behaviour to be safe from any kind of reprimand by the team members or the leadership. The scope of the literature review includes studies that relate leadership behavior, organizational culture and team effectiveness with psychological safety.

The prevalent trends in organizational behavior can be attributed to a diverse workforce, highly specialized tasks which demand collaboration in a rapidly changing world, driven by technological advancement. Moreover, inter-disciplinary research has added to scientific knowledge about how teachers, students and administrators can work together to achieve the organizational objectives. The corporate world has undergone a shift in team structures; the same shift can be observed in the educational institutes as the teachers and educational administrators are expected to work in teams in order to achieve a shared organizational goal. Research studies by Womack et al. (1991), Hammer and Champy (1993) & Katzenbach and Smith (1993) (cited in Delarue et al.,2008) conclude, with empirical findings, that working in teams lead to improvement in organizational outcomes. Additionally, the research on teamwork has identified the critical role of affect in shaping employee behavior and has led the researchers to identify various team constructs which play a major role in the desired organizational outcomes

(Barsade et al., 2007). One of these major constructs is psychological safety which has been found to be primarily instrumental in improving organizational learning (Edmondson, 1999).

Gerlach & Gockel (2018) call psychological safety a "resource" at the disposition of teachers which may be used to the organization's benefit. It is a resource worth fostering by the school leadership, as increased psychological safety has been proven to result in the team's creative behavior: creative team performance and knowledge sharing (Kessel et al., 2012); increasing employee involvement in creative tasks (Carmeli et al., 2010; Bergmann & Schaeppi, 2016); a mediator for improving the team's innovative work behavior (Messman et al., 2017; Sun & Huang, 2019; Zhu et al., 2019).

Research also suggests that psychological safety may influence organizational learning by providing the context. Studies have linked psychological safety to team learning behavior (Edmondson, 1999; Carmeli et al.,2009); exploratory and exploitative learning (Kostopoulos et al., 2011); improved understanding of systems thinking in turn improving team project performance; enables learning from failures which leads to improved organizational learning (Carmeli et al., 2009) Psychological safety has not been extensively researched in the education sector and those studies that have researched it draw from the theory of organizational behavior. A study by Bordovskaia & Baeva (2015) reports that components of the well-being of the students as emotional comfort, self-confidence, a higher level of cognitive activity were reported in those schools with high levels of psychological safety of the teachers. A study by Higgins et al. (2012) examined organizational learning (OL) in the context of a large urban US school district and found out that psychological safety is affected by the leadership behavior in school and also it contributes significantly towards the organizational learning.

The antecedents of psychological safety were identified by Kahn (1990) who is also credited with identifying the influence of the personal dispositions of employees that also have an effect on their psychological safety. Kahn (1990), therefore, called future research to explore these factors in relation to psychological safety. The antecedents of psychological safety include interpersonal relationships, group dynamics, leadership, and organizational norms. Researchers have responded to Kahn's recommendation and explored

the personal factors such as personality traits, self-expression, risk-taking behavior in relation to psychological safety (Edmondson & Mogelof, 2006).

Psychological Safety and Leadership Behavior

A major contributing factor in the development of psychological safety is the leadership as employees look up to their leaders to gauge which actions are appreciated or reprimanded by the organization. (Salancik and Pfeffer, 1978; Nembhard & Edmondson, 2006). School leaders play a key role in developing the school's culture and its social norms. Carmerli & Gittel (2009) affirm that psychological safety is preceded by trust and good rapport between the team members and the leader. Presently, various researches have positively associated leadership behavior with psychological safety such as dyadic leadership discovery increases psychological safety (Roussin, 2008); transformational leadership is positively related with psychological safety (Raes et al., 2013), the role of humble leadership in creativity development by fostering psychological safety (Gonçalves & Brandão, 2017); humble leadership for fostering psychological safety and employee engagement (Walters & Diab, 2016); transparent leadership behavior leads to employees creativity mediated by psychological safety (Yi et al., 2017) and supervisors' prosocial motivation and psychological safety (Frazier & Tupper, 2018).

Organizational Culture and Psychological Safety

Organizational culture is a term that is commonly used for a variety of situations that occur in the organizations, it may be used interchangeably with climate and environment. Hofstede (1991) affirms this behavioral aspect of the organizational culture by saying that it is shaped through the behavior of the people of the organizations and also by how behavior is interpreted. Both of these factors contribute towards how culture is formed and perceived in an organization. The administration also plays a vital role in the development of an organization's culture as the chain of command strengthens a certain type of organizational culture through the way it responds to different stimuli in an organization which is perceived and acted upon by the members of the entire organization. It is commonly understood that culture trickles down from the

top and is influenced by the leaders, managerial staff, and the board members and executives because they are responsible for decisions regarding the processes and structure within an organization. Yet, it is undeniable that employees also impact the culture that is developed at work.

Leadership traits, orientations and behavior may be the most important factors in shaping the organizational culture yet leaders cannot do it all by themselves. Each member of the organization and each team has to contribute in the culture which would eventually improve the work environment for the employees. Dodd (1989) recommended that the principals and the staff developer should offer the right support which would lead to a conscious cultivation of psychological safety which would direct the teachers towards innovation, self-development and whole-school improvement.

One of these prominent culture models is presented by Schneider (1999) who has given four broad types of culture that may exist within an organization. The model presented by Schneider also covers two dimensions both of which are found in the organization namely: People Orientation and Company Orientation. These orientations of the organizations define what the organization focuses on, what it invests in and what it pays attention to. A people-oriented organization is the organization whose biggest assets are its employees and they are instrumental in the achievement of objectives. On the other hand, a company-oriented organization focuses on the tasks, goals and objectives and the emphasis lies here rather than with the workers. Based on these four orientations, Schnedier (1999) presents four culture types that may exist in organizations as follows: Control (Company/Reality), Competence (Company/Possibility), Collaboration (People/Reality) and Cultivation (People/Possibility).

Team Effectiveness

Another important variable of this study is team effectiveness which may be assessed across a variety of sub-constructs. This study makes use of the GRPI (Goals, Roles, Processes & Interpersonal Relationships) by Rubin, Plovnick, and Fry (1977) cited in Wijeratne (2016). This model of team effectiveness and analyses its moderating effect on leadership and psychological safety. A similar finding has been put forward by Meng et al.

(2016) which indicates a moderating role of team effectiveness on leadership behavior and subordinate creativity.

A review of the literature further strengthens our argument that antecedents of psychological safety are rooted in major organizational factors such as leadership behavior, team dynamics and organizational culture which leads us to develop the following theoretical framework of the study and hypothesize relationships between the dependent variables, leadership behaviour, organizational culture, leadership style, team effectiveness and the independent variable, psychological safety.
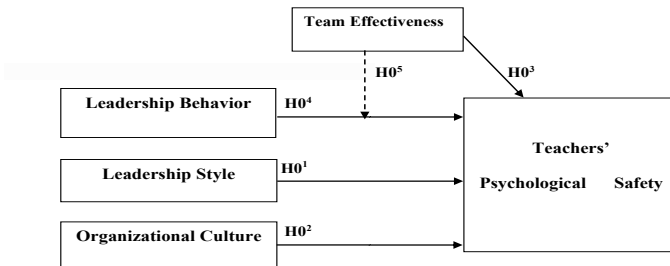

Figure 1. Theoretical Framework of the Study

Hypotheses

$H0^1$: There is no significant difference in psychological safety of teachers in Country Club, Impoverished, Authoritarian and Team leadership styles of the school leaders

$H0^2$: There is no significant difference is psychological safety of teachers across the Control, Competence, Collaborate and Cultivate organizational culture types

$H0^3$: There will be no significant prediction of teachers' psychological safety by team effectiveness

$H0^{4a}$: There will be no significant prediction of teachers' psychological safety by leadership task-oriented behavior

$H0^{4b}$: There will be no significant prediction of teachers' psychological safety by the leadership relations-oriented behavior

H0^{5a}: The effect of leadership task-oriented behavior on teachers' psychological safety is not moderated by team effectiveness

H0^{5b}: The effect of leadership relations-oriented behavior on teachers' psychological safety is not moderated by team effectiveness

Methodology

This study adhered to the survey research design with the intent of gathering large amount of rich data which is open to multiple analyses. A pilot study on 120 participants was conducted in order to check the reliability of the adapted instruments and to analyze the feasibility of the study, the expected level of relation between the variables, the response rate and the time taken by the participants to respond to the questionnaire, which was an average of 15-20 minutes. Minor changes were made in the questionnaire after the feedback of respondents in the pilot study which included replacing terms like 'leader' and 'organization' with 'principal' and 'school'.

Data Collection

A clustered sample was used to gather participants for this research and the data was collected from school teachers through questionnaires administered face-to-face since it had the higher response rate however some respondents were accessed online.

Participants

The target population of this study is secondary and higher secondary school teachers of the private sector within the geographical limits of urban Islamabad, Pakistan. It is further de-limited to include school teachers of the major private schools offering Cambridge Education System only. According to Pakistan Education Statistics (2016-2017) and Registration & regulation of Private Educational Institutions (PEIs) in Islamabad Capital Territory (ICT),

an estimate number of private school teachers is 7,826 out of which 1,484 are secondary school teachers. A 40% sample consisting of 600 participants was selected from secondary/higher secondary teachers using clustered sampling technique. The population is already in the form of clusters with reference to each school as a separate cluster; therefore, in the second phase of sampling, teachers were randomly selected from each cluster. A total of 46 private schools in urban Islamabad were approached to collect data and 13 teachers were randomly selected from each school to participate in the study. On the whole, 383 female teachers (63.8% of the sample) and 217 male teachers (36.2% of the sample) responded to our survey working at the 46 private schools in urban Islamabad, Pakistan. Out of these, 278 which 46.3 % teachers held permanent teaching positions, 211 (35.2%) were on a fixed term contract and 111 (18.5%) were newly inducted and were serving the probation period of their positions.

Table 1. *Descriptive Statistics of the Sample*

	Demographic Characteristics	**Frequency**	**Percentage**
Gender	Male	217	36.2
	Female	282	63.8
Job Status	Permanent	278	46.3
	Fixed Term Contract	211	35.2
	Probation	111	18.5
	Total	600	

Instruments

The instruments chosen for this research were standardized instruments with established validity and reliability. These scales were adapted according to the requirements of the study and administered to the respondents collectively.

Psychological Safety Scale: Developed by Edmondson (1999), is a standardized scale with established validity and reliability. It is an 11-item questionnaire on a 5-point Likert scale which indicated high reliability with a Cronbach alpha value of α=0.89

The Managerial Grid: Developed by Blake & Mouton (1964) to find out the leadership style based on scores on relations-oriented and task-oriented leadership behaviour. The grid was adapted into Leadership Self-Assessment questionnaire by The Vision Council (2010) for measuring scores on leadership behavior and identifying the leadership style. The Leadership Style questions are broadly classified into the four leadership styles: Country Club (high relations, low task), Team Leader (high relations, high task), Authoritarian (high task, low relations), and Impoverished leadership (low task, low relations) excluding the middle of the road leadership style from the original model. The scale consists of 18 items on a 5-point Likert scale, out of which 9 measure the leadership relations-oriented behaviour and the other 9 measure the leadership task-oriented behaviour. Scoring of this questionnaire is done by plotting the acquired scores on the grid to find the leadership style. The relations-oriented leadership behaviour and task-oriented leadership behaviour were found to be highly reliable with α=0.87 and α=0.85 respectively.

Organizational Culture Survey: Schneider's (1994) The Culture Assessment Scale also divides the organizational culture into four categories namely: Control, Cultivation, Collaboration and Competence. The items of the questionnaire are already categorized into options and the highest score on each culture type out of 20 would determine the dominant culture of the organization.

Team Effectiveness Questionnaire by London Leadership Academy, was adapted to include the four dimensions: goals, roles, team processes and inter-personal relationships keeping the GRPI model of team effectiveness in the framework of the study. The 35 items on a 5-point Likert scale, showed strong reliability with a Cronbach value of α=0.77.

Data Analysis

Analysis of Variance

A one-way analysis of variance was used to test the following hypotheses:

H01: There is no significant difference in psychological safety of teachers in Country Club, Impoverished, Authoritarian and Team leadership styles of the school leaders

As shown in Table 2, there was a significant effect of the leadership style on psychological safety at the $p<.05$ level in the four groups $F(3,596) = 71.392$, $p<0.05$. Further analysis included the Levene's statistics for homogeneity of variances which was 47.69, $p<0.05$. Welsh and Brown-Forsythe statistics for robust test of equality of means, were 68.83 and 56.12 respectively ($p<0.05$).

Table 2. *One-Way Analyses of Variance in Psychological Safety and Leadership Style=600*

	Sum of Squares	Df	Mean Square	F
Between Groups	17376.378	3	5792.126	71.392*
Within Groups	48354.122	596	81.131	

*Note, *p < .005.*

The 138 teachers with an authoritarian leader had an average psychological safety of 31.98 (SD = 11.77); 85 participants with an impoverished leadership reported a mean psychological safety of 28.44 (SD = 11.73); the 295 participants with team leadership reported a mean of 41.83 (SD = 6.3) and the 85 teachers under a country club leadership reported an average 33.67 score (SD=8.63). (Figure 2) Tukey's post-hoc statistics indicated that team leadership results in the highest psychological safety in comparison with the other leadership styles (p<0.05). The findings lead us to reject the null

hypothesis, proving that psychological safety varies across the different leadership styles and this difference is statistically significant.
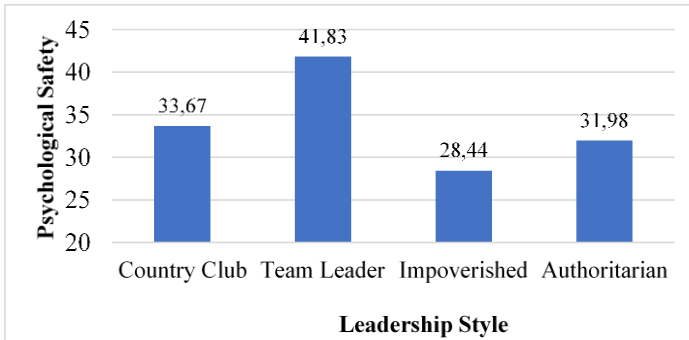

Figure 2. Mean scores of Psychological Safety across four Leadership Styles

H02: There is no significant difference is psychological safety of teachers across the Control, Competence, Collaborate and Cultivate cultures

As shown in Table 3, There was a significant effect of the culture on psychological safety at the p<.05 level in the four groups F (3,596) = 8.29, p<0.05. Further analysis included the Levene's statistics for homogeneity of variances which was 4.95 p<0.05. Welsh and Brown-Forsythe statistics for robust test of equality of means, were 8.06 and 8.28 respectively (p<0.05).

Table 3. *One-Way Analyses of Variance in Psychological Safety and Organizational Culture, N=600*

	Sum of Squares	Df	Mean Square	F
Between Groups	2634.28	3	878.09	8.29*
Within Groups	63096.213	596	105.86	

*Note, *p < .005.*

The 126 teachers in a Control culture had an average psychological safety of 34.43 (SD = 11.01); the 139 cases of a Competence culture reported a mean psychological safety of 33.99 (SD = 11.13); the 198 participants from a

Collaborate culture reported a mean of 38.44 (SD = 10.34) and the 137 teachers in a Cultivate culture scored an average 38.36 (SD=8.46). (Figure 3) Tukey's post-hoc statistics indicated a statistically significant difference between the highest scoring culture being a Collaborate culture and lowest being a Competence culture ($p<0.05$). This leads to the rejection of null hypothesis and we conclude that there exists a statistically significant difference in psychological safety between different school cultures.
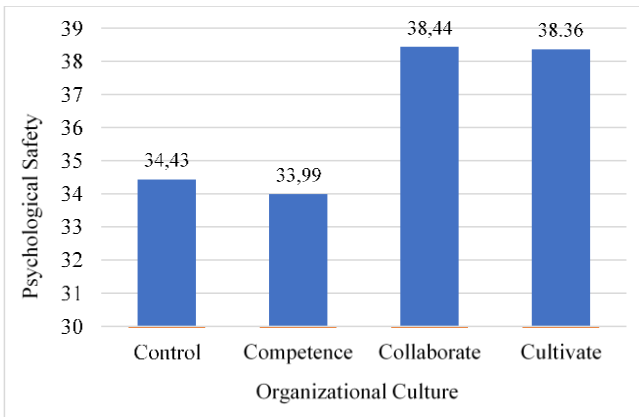

Figure 3. Mean scores of Psychological Safety across Organizational Culture

Moderated Regression Analysis

To test the moderating effect of team effectiveness on the relation between principals' leadership behavior and the school teachers' reported psychological safety, a moderated regression analysis was carried out using Process by Hayes (2018). The results of the analysis found support for a significant moderation effect of team effectiveness.
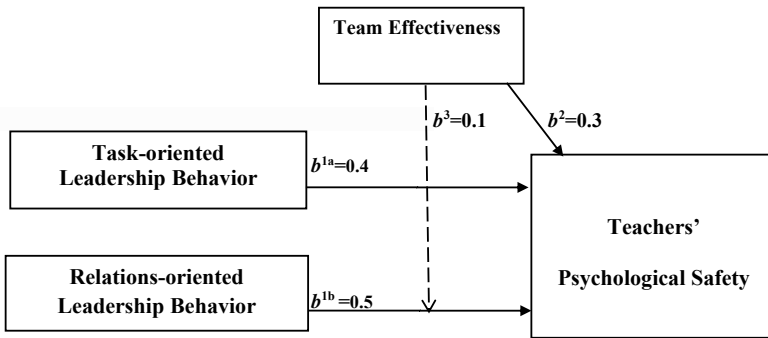
Figure 4. Statistical Model

H03: There will be no significant prediction of teachers' psychological safety by team effectiveness

Another promising finding was the role of team effectiveness (b=0.3) in significantly predicting psychological safety which was statistically significant. The findings lead to the rejection of null hypothesis H03 and lead to the alternate hypothesis. To avoid the effect of multi-collinearity between the dichotomy of leadership behavior, two separate analyses were carried out with respect to leadership relation-oriented score and leadership task-oriented score, both of which yielded significant results in their respective model establishing the significant effect of leadership behavior on psychological safety.

H04a: There will be no significant prediction of teachers' psychological safety by the leadership task-oriented behavior

H05a: The effect of leadership task-oriented behavior on teachers' psychological safety is not moderated by team effectiveness

The findings lead to the rejection of null hypothesis H04a and H05a and logically lead to the alternate hypotheses establishing that task-oriented leadership behavior is a significant predictor of psychological safety and the relation between leadership task behavior and psychological safety is partially moderated by team effectiveness.

Table 4
Moderation effect of Team Effectiveness (TE) on the relationship between Leadership Task-oriented behavior (LTB) and Psychological Safety (PS), N = 600

Predictors	*b*	Lower	Upper	B	*t*
Constant	35.98	35.29	36.68		102.15
LTB	0.53	0.43	0.64	0.37	10.16
TE	0.29	0.18	0.25	0.41	11.03
LTB x TE	0.007	0.003	0.01	0.11	3.49

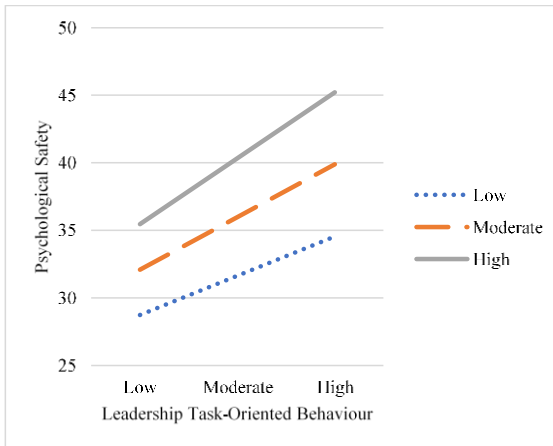*Note.* Fit for model R^2 = .46, $F(3, 596)$ = 172.63, $p < .005$.

Figure 5. Simple Slope Plot of Moderation of Team Effectiveness on the Relation Between Psychological Safety and Leadership Task-Oriented Behaviour

H0^{4b}: **There will be no significant prediction of teachers' psychological safety by the leadership relations-oriented behavior**

H0^{5b}: The effect of leadership relations-oriented behavior on teachers' psychological safety is not moderated by team effectiveness

The findings lead to the rejection of null hypothesis H0^{4b} and H0^{5b} and logically lead to the alternate hypotheses establishing that leadership relations-oriented behavior is a significant predictor of psychological safety and the relation between the two variables is moderated by team effectiveness.

Table 5
*Moderation effect of Team Effectiveness (TE) on the Relationship between Leadership's
relation-oriented behavior (LRB) and Psychological Safety (PS), N = 600*

| Predictor | B | CI$_{95\%}$ for *b* | | B | *t* |
		Lower	Upper		
Constant	36.07	35.52	36.67		123.14
LRB	0.66	0.58	0.73	0.54	17.99
TE	0.29	0.16	0.22	0.37	11.48
LRB x TE	0.006	0.002	0.007	0.12	4.37

Note. Fit for model R^2 = .59, $F(3, 596)$ = 295.23, $p < .005$.
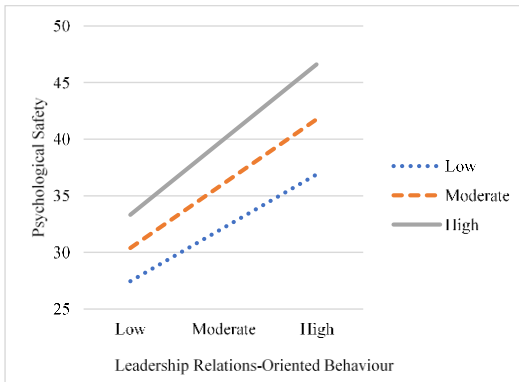

Figure 6. Simple Slope Plot of Moderation of Team Effectiveness on the Relation Between Psychological
Safety and Leadership Relation-oriented Behavior

As shown in Table 4 and Table 5, both models are overall significant $F(3,596)$ = 295.23, $p<0.005$, R2 =0.59 and R2 = .46; $F(3, 596)$ = 172.63, $p <$ .005 which leads to the rejection of our null hypothesis. According to the data analysis, relations-oriented leadership, task-oriented leadership and psychological safety are positively related at all levels of team effectiveness. As team effectiveness increases, the relationship between people focuses leadership and psychological safety grows stronger; task focused leadership and psychological safety also strengthen in relationship as team effectiveness increases. Figure 5 and 6 illustrate a simple slope plot of leadership and psychological safety at different levels of team effectiveness. The plots provide evidence that at high levels of team effectiveness, psychological safety is the highest as leadership's people focus and task focus increases.

Findings & Discussion

Organizational behavior theory has advocated team work, voice behaviour and collaboration as means of achieving organizational goals efficiently and to ensure that organizational learning does occur. A major problem posed in this case is the psychological safety of the team members since teams with low psychological safety of the teachers are dominated by fear, blame, and inflexibility who resort to impression management, withholding critical information and feeling afraid of taking interpersonal risk. More broadly, all of this fear results in "pervasive rigidity" of the team as a whole and affects the work environment of the school as well. School administration must therefore be aware of the mechanism of team's psychological safety in order to find out how schools and school leadership can use, to their benefit, this inter-personal construct that is often tied to improved organizational outcomes. The study set out to find out, in the educational sector, how factors at the organizational and team level namely school leadership, organizational culture and team effectiveness, affect psychological safety of teachers. The purpose of undertaking the problem was to find out the factors which are significantly related to psychological safety so that school administration can make conscious decisions while developing the school culture and leadership and foster psychological safety in the teachers work teams. The study was also an attempt to bridge the gap in literature of educational research where psychological safety of teachers has not been explored intensively; to our knowledge, this is the first study of psychological safety of teachers in Pakistan.

The key findings that emerge from our data analyses demonstrate that there is a significant effect of the leadership style on psychological safety at the $p<.05$ level in the four groups $F(3,596) = 71.392$, $p<0.05$ with Team Leadership, which has both a high relations-orientation and high task-orientation, presented the highest psychological safety amongst the teachers. The moderated regression analysis showed both models are overall significant $F(3,596) = 295.23$, $p<0.005$, $R2 = 0.59$ and $R2 = .46$; $F(3, 596) = 172.63$, $p < .005$. Both orientations of the principal's leadership behavior, relation-oriented and task-oriented, play a considerable role in fostering psychological safety. Furthermore, a statistically significant difference between the highest

scoring culture was found which is the Collaborate culture and lowest being a Competence culture (p<0.05). In addition, the study hypothesized a moderating role of team effectiveness on the relationship between leadership and psychological safety; however, the analysis revealed a statistically significant yet marginal interaction of team effectiveness with leadership for predicting psychological safety (Meng et al., 2016). Nevertheless, team effectiveness proved to be a statistically significant predictor of psychological safety and simple slope analysis showed that psychological safety increases at higher level of team effectiveness.

The conclusions drawn from our analyses show school leadership should be aware of the importance of psychological safety in their teams if they aim to benefit from the teachers' innovative work-behaviour. In order to achieve the maximum psychological safety, leadership style should be adapted to team leadership which puts equal focus on the organization as well as its people. In the findings, leadership behaviour emerged as an important factor in increasing psychological safety given that the leadership emphasizes both the task and the people; this may be considered a further validation of the fact that school leadership is a significant predictor of the teachers' psychological safety (Aranzamendez et al., 2015). Nevertheless, leadership behavior that emphasizes building relations with the employees proved to provide the better context for increasing psychological safety as compared to the leaders' task-oriented behaviour, this conclusion is consistent with the findings of Wong et al. (2010), Nielsen et al. (2013) and Roussin (2008) Similar conclusions were drawn from the analysis of organizational culture; teachers working in schools with collaborate and cultivate organizational cultures reported the highest psychological safety as both culture types are people-oriented and emphasize creativity, innovation, synergy and team work. Post-hoc analysis further indicated that these two organizational cultures result in significantly higher level of psychological safety as compared to the company-oriented cultures named Competence and Control.We recommend practitioners to consciously develop a collaborative and innovation-oriented school culture and disseminate it through Team Leadership style which translates into high priority to teachers as well as the achievement of organizational goals.

Reforming the school culture in order to improve psychological safety would require a lot of time and conscious effort, but if done right it can be contagious. The organization must focus itself on creating an environment where people feel safe to contribute and engage with the team and their leadership. The behavioral side of culture is built person by person, team by team through the routine social transactions that happen every day in an organization. It will transmit through dialogue and the explanations provided by leadership about the behavior and the natural and human events occurring within an organization (Lustig and Koester, 1999). Similarly, analyses of the school cultures showed that schools that give attention to their human resource and maintain an egalitarian team environment, all the while focusing on the organization's objectives, are the most successful in fostering high psychological safety in its teachers.

Furthermore, maintaining team effectiveness by having clear goals, well-defined roles, team processes and inter-personal relationship would be beneficial as high team effectiveness interacts with leadership behaviour to improve psychological safety of the team as a whole. School administration can consider these findings as potential mechanism for bringing changes in culture, team effectiveness and leadership behaviour for an outcome of increased psychological safety. This may result in creating a school which fosters psychological safety of its teachers and consequently leads to a multitude of benefits and whole-school improvement.

Limitations

The limitations of the study include the following:

1. Qualitative data was inaccessible which could serve to be beneficial in explaining the quantitative findings of the antecedents and outcomes of psychological safety of teachers.

2. Leadership scoring and styles were determined based on respondents' perspectives due to inaccessibility and organizational restraints we unable to acquire self-report data from the school principals.

3. The data on the schools' organizational culture was categorical data which was a limitation of the chosen scale itself. Future studies can bridge this gap by exploring other organizational culture scales which provide quantitative data across other constructs measured as continuous variables, as it would be helpful in carrying out further inferential analyses.

Recommendations for Future Research:

Future researchers can explore a variety of scales for measuring dimensions of organizational culture and their relationship with psychological safety. Another important research direction is to examine the implications of high psychological safety of teachers on their job performance and other organizational outcomes specific to the educational sector. Future studies could investigate the association between teachers' personal dispositions and their effects on psychological safety such as self-efficacy, emotional intelligence, personality types and psychological safety. An interesting facet of psychological safety research in the educational sector would be to explore the effects of teachers with high psychological safety on the students learning outcomes. Additionally, the same research can be replicated as a mixed-method research by collecting qualitative data and triangulating the findings. A variety of leadership styles have recently emerged such as servant leadership, ethical leadership and paternal leadership; these leadership styles may also be explored in relation to psychological safety of the teachers.

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