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Research Article

Measurement of Perceived Psychological Safety: Integration, Review and Evidences for the Scale in the Context of Turkiye

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ABSTRACT

Psychological safety can predict many positive individual and organizational outcomes at work, and previous research addressed how psychological safety contributes to positive work attitudes and behaviors. In Turkey, there is quite an amount of research showing the contributing role of psychological safety perception on employees' positive performance behaviors and organizational effectiveness and innovativeness. However, previous research in Turkey does not adequately show the reliability and validity of the psychological safety scale, which was developed by Edmondson (1999). Based on the suggested requirement, this study aimed to investigate the psychological safety perceptions of individuals who work in various sectors in Turkey. The adapted version of the psychological safety scale was used to gain evidence for the reliability and validity of the instrument in Turkey. In total, 585 individuals working in various industries and from various occupational groups participated in the research. Both exploratory factor analysis and the confirmatory factor analysis showed that Turkish adapted version of the psychological safety scale was valid and reliable.

Keywords: Psychological Safety, Scale Reliability, Scale Validity, Turkey

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1. Introduction

Today, the growing organizations function with the works that are performed collaboratively, and the business environment requires more creative employees to gain performance and to be sustainable. When compared to previous work systems, today, employees mostly engage in cognitive efforts rather than physical efforts. The cognitive abilities, problem-solving qualities, and collaborative behaviors of employees stand out as the requirements for today's business environments. Particularly, these qualifications have become more essential in specific industries, such as information technologies, marketing, services, education, tourism and hospitality, and product research and development. Organizational research addressed psychological safety as an important concept in understanding how individuals collaborate to accomplish tasks and to attain common goals (Edmondson, 2002; Edmondson & Lei, 2014), hence making it an important subject for further research.

On the other side, individuals encounter several difficulties and workplace risks in organizations. Obviously, employees develop several perceptions regarding these. For example, they may perceive interpersonal risks, especially when they exhibit discretionary behaviors. Thus, such kind of risk perception may become an obstacle for the beneficial voluntary attitudes and behaviors, including creativity and innovative behaviors. Conversely, a psychologically safe work environment where employees feel safe may reduce risk perceptions (Edmondson & Lei, 2014) and eliminate the hesitations for engaging in cooperative and innovative behaviors. Individuals may not exhibit creative behaviors or avoid actively expressing their actual opinions within decision-making processes if they perceive them as risky. As cognitive appraisal theory (Lazarus, 1966) states, cognitive appraisal occurs when a person perceives stressors and uses the required resources to minimize, eliminate, or tolerate the effect of stressor, which majorly contribute to his/her response to stress. In that sense, the feeling of psychological safety acts as a personal resource that enables the person to minimize the feeling of threat and perceived harm of expressing innovative ideas or behaving collaboratively within task groups. In other words, people make cognitive appraisals and regulate their workplace perceptions in order to sustain their personal well-being and performance. Psychological safety preserves as a socio-emotional resource that leads to tolerating the risk perceptions and taking part in collaborative activities and actively displaying different opinions in the workplace. Hence, such a perception contributes to achieving shared goals, building participative decision-making, and becoming a high-performing organization.

Further, stress is increasingly recognized as a central occupational health and safety (OHS) topic in both a theoretical and practical manner. Its potential effects on employees' health and psychological well-being have been demonstrated (Terry, Nielsen, & Perchard, 1993; Tsaur & Tang, 2012). An individual's ability to think, feel, and behave healthily both inside and outside of the work environment defines psychological health. Just as physical hazards can be a threat to employees' physical safety (Beyazit, 2006; Narter, 2015), psychological hazards influence the wellness of organizational members. In this context, a psychologically safe work environment can reduce psychological hazards, job stress, and improve OHS.

Besides the contributions to employees' positive work attitudes, collaborative work environment, and organizational performance, psychological safety has been found to be related to several positive organizational outcomes, such as high-performing team behaviors, learning behaviors, creativity, innovative employee behaviors, and team performance (Delizonna, 2017; Edmondson, 1999; Newman, Donohue, & Eva, 2017). Supporting this suggestion, there is a growing body of conceptual and empirical research that has investigated psychological safety by determining its linkages with employee, team, and organization-level consequences.

Considering the crucial importance of psychological safety for individuals and organizations, the goal of this study is first to review the extant literature on psychological safety and then to present the discussion of the empirical findings, including practical and conceptual implications, and future directions. What makes this study noteworthy is that the reason behind the execution of the research is to gain insight into the evaluation of a specific population's psychological safety perception as well as to validate the measurement of the concept. In sum, this study has the aim to investigate the psychological safety perceptions of employees who have been working in Turkey. Although there are several studies that have shown the importance of psychological safety for employees and organizations in Western literature, the reflection of this concept in the Turkish context should be examined clearly to gain more understanding about psychological safety. The concept of psychological safety was developed in a social context and culture where there is a low power distance and individualism (see Hoftsede, 2011). Therefore, studying this concept across different societies is valuable for providing insights and implications for the relevant literature and practice.

Edmondson (1999) developed a psychological safety scale that has been used extensively among researchers. The adaptation of Edmondson's (1999) scale to the Turkish language was performed by both Yener (2015) and Üçok and Torun (2016) at different times. Although the original scale is one-factor, a previous adaptation study within Turkish sample groups indicated two subfactors called "Toleration'' and "Initiative" (Yener, 2015). The first factor included reverse items, and the second subfactor of toleration was used for the measurement of psychological safety; however, in the present study, the original scale was used with all its items. Before applying the scale, the researchers of this study have performed the Turkish translation for each item, and the items were corrected because of the possibility of misunderstanding. Following the procedures and the outcomes of the previous research and applying the correction for the reverse items, this study assessed the validity and reliability of the scale among the participants from Turkey.

In sum, the study unfolds as beginning with a brief literature review, comprising the conceptual definitions and historical outline of the psychological safety concept. Then, the empirical evidence related to the antecedents and consequences of the concept is briefly presented. The study continues with the description of the research methods and the evaluations of the research findings. Further, the suggestions about what has been learned from the current study and the critical results that may contribute to the controversies and gaps in the literature are discussed. Then, the future directions to be investigated are stated, and the limitations of the research are identified. Finally, the conceptual, managerial, and practical implications of this study are briefly suggested. The study is concluded with the wish that it will encourage academicians to reveal new findings and perspectives of psychological safety and will bring awareness for the managers to create psychologically safe work environments in organizations.

2. Literature Review and the Research Ground

In the relevant literature, the concept of psychological safety has its roots in organizational change studies. Schein and Bennis (1965) argued that psychological safety might be essential to feel secure in organizational challenges. Schein (1993) later argued that feeling psychologically safe helps people to overcome problems such as anxiety. Along with the suggestions of Schein and Bennis' (1965) study, Schein (1993) addressed that when individuals feel psychological safety, they were freer to focus on group goals and were proactive in solving problems rather than being focused on self-protective strategies. The ongoing studies have examined psychological safety in organizational settings. Kahn (1990) also investigated psychological safety with serial qualitative

studies that showed how psychological safety contributes to individual work engagement in organizations. Drawing from Kahn (1990)'s qualitative study findings, it was underlined that psychological safety affects individuals' willingness to "employ or express themselves physically, cognitively, and emotionally during role performances," rather than disengage or "withdraw and defend their personal selves" (p.694).

As it can be seen, first explored by pioneering organizational scholars in the 1960s and 1990s, psychological safety research held its importance and continued in the 2000s to the present. The common argument of psychological safety works is that it has a fundamental role in reducing interpersonal risk, which also diminishes uncertainty avoidance and resistance to change (Edmondson, 1999; Kahn, 1990; Schein & Bennis, 1965). Particularly, psychological safety has become a theoretically and practically significant phenomenon in the last decades because of the crucial importance of organizational learning and innovation in today's globalized business environments. However, psychological safety conceptualization was uncovered by Edmondson (1999), and the later studies followed Edmonson's (1999) definition. Edmondson (1999) defined the concept as individuals' positive beliefs about interpersonal risk in the workplace. Employees think that they will not be rejected for what they think and say. In a psychologically safe work environment, it is expected that individuals respect each other's knowledge, skill, and abilities. Also, employees feel safe to produce new ideas and to take risks. The reason for this comes from employees' beliefs about not facing embarrassment, ridicule, and shame when they speak and act differently (Edmondson & Lei, 2014).

The concept of psychological safety might have its theoretical root from Maslow's hierarchy of needs. According to Maslow (1943), psychological safety is about "detachment out fear and anxiety" (Chen, Van Assche, Vansteenkiste, Soenens, & Beyers, 2015). Maslow (1943) also argued that safety comes after the basic physiological needs, such as eating and sleeping. Although the discussions about psychological safety have been updated since the reference, four main characteristics have been stated as related to employees' psychological safety:

- First, employees perceive social support in organizations. As a result, they can have psychological safety perceptions.
- Second, psychological safety is generally shaped by several group characteristics, such as group size, status, norms, and some informal interpersonal relationships.
- Third, a supportive leader can provide psychological support to employees through consistent attitudes and behaviors. For this reason, individuals' psychological safety can increase (Edmondson, 1999; Kahn, 1990).

Psychological safety can be studied as a contrasting concept of negative workplace attitudes. Individuals' psychological safety perceptions in everyday work life can be analyzed in the light of positive workplace attitudes. Understanding psychological safety contributes to organizations positively (Chen et al., 2015). Psychological safety is extensively seen in public spaces where individuals feel the need to manage the impressions about them. When people perceive that they have an inferior status in a social environment, they are less likely to feel psychologically safe since they should manage their appearance/ impression in front of other people to avoid critics. Psychological safety is important in situations like risk-taking social contexts that have challenges (Wanless, 2016).

Previous studies clarified the significant role of psychological safety in creating high-quality relationships and relational coordination as well as enhancing individuals to focus on shared goals, shared knowledge, and mutual respect accompanying innovativeness and organizational

performance. For instance, psychological safety enables employees to share information and knowledge (Collins & Smith 2006; Siemsen, Roth, Balasubramanian, & Anand, 2009), to put forward suggestions for organizational improvements (Detert & Burris 2007; Liang, Farh, & Farh, 2012), and to act autonomously to develop new products and services (Baer & Frese, 2003). The impacts of psychological safety on employee knowledge-sharing has been showed in extensive works (e.g., Frazier, Fainshmidt, Klinger, Pezeshkan, & Vracheva, 2017; Kessel, Kratzer, & Schultz, 2012; Siemsen et al., 2009). Past research has shown that psychological safety increases team learning (Bunderson & Boumgarden 2010; Carmeli & Gittell 2009; Kostopoulos & Bozionelos, 2011), organizational learning, and performance (Carmeli, Tishler, & Edmondson, 2012; Collins & Smith 2006; Schaubroeck, Lam, & Peng, 2011; Walumbwa & Schaubroeck, 2009). In particular, psychological safety was found to be effective in innovative work behaviors (Taştan & İşiaçık, 2020), employee involvement in creative work (Carmeli, Riter- Palmon, & Ziv, 2010), creative team performance (Kessel, Kratzer, & Schultz, 2012), helping behaviors, and creativity (Guchait, Wang, & Abbott, 2016).

The current study identified theoretical and empirical studies for the literature review through various approaches, comprising searches in scientific databases (e.g., Business Source Complete, ISI Web of Science, and PsycInfo), and the authors' evaluations on the recent meta-analyses (e.g., Frazier et al., 2017). Further, comprehensive reviews were performed on the conceptual definitions, construct validations, and empirical articles which have been carried out in different cultural contexts (e.g., Arslan & Yener, 2016; Carmeli et al., 2010; Chughtai, 2016; Derin, 2017; Edmondson 2004; Edmondson et al., 2007; Yener, 2015; Zhang, Fang, Wei, & Chen, 2010). During the adaptation of the concept to the Turkish language, psychological safety sometimes has been understood and translated as 'security.' Although security refers to not being exposed to fear and anxiety, psychological safety is usually explained by having psychological comfort. Feeling psychologically safe is about considerations that one is not getting hurt and harmed emotionally. According to the previous researches, psychological safety is a cognitive statement related to the workplace and affects workplace outcomes; meanwhile, trust is more about thinking about psychological vulnerability (Newman et al., 2017; Yener, 2015).

Putting aside the concepts related to psychological safety, such as cooperative work, goal achievement, innovative work behavior, creativity, team learning, interpersonal trust, organizational climate, and organizational performance, the authors have preferred limiting the study's focus to explicitly confirm the measurement of psychological safety within a specific cultural setting, Turkey. In sum, the present study has been grounded on the need to explore the psychological safety perceptions of employees in Turkey and to evaluate the reliability and validity of the measurement instrument.

3. Methodology

In the following part, the research method of the study is described. First, the sampling method and the procedure are explained, then the measure used to assess the study variable is displayed.

3.1. Sample and Procedure

Regarding the structure of the survey, the first section of the questionnaire included demographic information, and the second section aimed to measure individuals' psychological safety. All the participants responded to demographic items, including their age, marital status, educa-

tional background, tenure level, and the current position in their current organization. Before collecting data, the ethical approval of the survey was attained from the Marmara University research ethics committee.

The convenience sampling method was performed, and the data for the present study was gathered from participants working in a variety of sectors in Turkey. The study concentrated on investigating employees' workplace perceptions in terms of psychological safety. In this respect, the sample of the study was limited to the individuals who were employed in organizations from different sectors. The participants were employees in managerial and non-managerial positions without senior management responsibilities. The data was gathered through online professional platforms and the contacts of the researchers. Additionally, the sample was randomly divided into two groups to carry out explanatory and confirmatory factor analysis. In the first stage, in order to examine the factor structure of the scale, 400 participants were reached. After the evaluation of factor structure of the scale, separate data was collected from different groups for validity and reliability analysis. In the second stage, the sample included 585 employees from varied industries and occupational groups with more male participants (N= 366, 62.5%) than females (N= 219, 37.4%). Most respondents were married (N= 341, 58.2%), followed by single (N= 242, 41.3%) individuals. The majority age interval of the sample was between 26-33 (N= 249, 42.5%), and most of the sample comprised of 249 (42%) individuals who have at least a bachelor's degree. 61.1% (N= 361) of the respondents were working in non-managerial positions; the remaining were working as managers (N=31, 5.3%).

3.2. Measurement

Edmondson (1999)'s "Psychological Safety Scale" was used to assess individuals' psychological safety in this study. The instrument is grounded in a construct definition based on a review of the literature through which Edmondson (1999) synthesized them into the construct of psychological safety comprising of 7 items. This measure assesses the extent to which a member of an organization feels psychologically safe to take risks, speak up, and discuss issues openly. Participants responded via a 5- point Likert scale that was varied from "Totally Disagree" (1) to "Totally Agree" (5). The Cronbach alpha value of the scale was found as 0.79 in Edmondson (1999)'s original studywhereas it was found as 0.93 in Üçok and Torun's (2016) study. Also, the Cronbach Alpha value was found as 0.76 in Yener (2017)'s study and 0.92 in Taştan and İşiaçık (2020)'s research. The 7 items scale's Turkish adaptation has been performed by Üçok and Torun (2016) and Yener (2015) at different times. The scale is unidimensional with reverse items in Edmondson (1999)' original study, yet they were reversed to positive statements for the current research. Previous research (Turgut & Erden, 2013) showed that negatively phrased items in the scale formed a separate factor apart from the original factor; however, the correction of the negatively phrased items into positive phrasing supported the original factor structure of the scale. Considering that evidence, the results of a different study (Taştan & İşiaçık, 2020) indicated that despite the transformation of the negatively phrased items of the psychological safety scale into positive phrasing, the original factor structure of the scale was still supported. Thus, it was seen that it would be significant to transform negatively phrased items into positive phrasing in the present study. Example items that were used in this study were "No one in this workplace would deliberately act in a way that undermines my efforts," and, "Members of this work can bring up problems and tough issues."Thus, the higher mean scores of the items indicated higher psychological safety perception. The full item list is shown in the Appendix.

3.3. Data Analysis

Before testing the validity of the scale, the factor structure of the scale was identified through principal component analysis with varimax rotation, and the results were cross validated by using confirmatory factor analysis. Further, reliability analysis was conducted for the scale.

4. Findings

4.1. Factor and Reliability Analyses

To understand the validity of the scale, factorial analyses were performed. Data were split into two categories. In the Time I study, analyses captured the data of 400 participants while the total data of 585 participants were included for the second Time II study analyses.

Time I Analysis: Exploratory Factor Analysis

An Exploratory Factor Analysis (EFA) on the psychological safety measure was performed, and this procedure produced a uni-dimensional model. The one-factor construct comprising psychological safety had factor loadings ranging from 0.687 to 0.778 and explained 62.74% of the variance. The KMO index was higher than 0.6, and the results of Bartlett's test of sphericity were significant ($p<0.05$). The result of the factor analysis was satisfactory for the scale. Internal consistency analysis was also performed on the psychological safety scale, and the results showed that the psychological safety scale was reliable. The Cronbach's α for this measure was 0.89, similar to the reliability of 0.82 reported in Edmondson (1999)'s study. The results of the EFA have been presented in Table 1.

Table 1: The Results of Principal Component Analysis

Factor name	Item Numbers	Factor Loadings	Cronbach alpha (α)
Psychological Safety	6. No one on this team would deliberately act in a way that undermines my efforts.	0.778	0.889
	7. Working with members of this team, my unique skills and talents are valued and utilized.	0.769	
	2. Members of this team are able to bring up problems and tough issues.	0.729	
	3. People on this team sometimes reject others for being different. *	0.719	
	1. If you make a mistake on this team, it is often held against you. *	0.715	
	5. It is difficult to ask other members of this team for help. *	0.697	
	4. It is safe to take a risk on this team.	0.687	

Note: Kaiser Meyer Olkin Measure of Sampling Adequacy= .885; Bartlett's Test of Sphericity Approx. Chi-Square= 1428. 923; df= 21; p value= .000; N=400; *The items were transformed to positive statements.

Time II Analysis: Confirmatory Factor Analysis

As previously stated, an EFA was used for considering the structure of research, and the confirmatory factor analysis (CFA) was utilized to examine the construction of the psychological safety scale. Hence, for the evaluation of construct validity, a confirmatory factor analysis was performed with the data obtained from 585 participants. The fit of the CFA model to the observed data was tested since it was sought to report evidence of the construct validity of the exogenous and endogenous variables. Using a CFA, a second-order measurement model was tested to assess

whether each of the measurement items would load significantly onto the scale with which they were associated (Nunnally & Bernstein, 1994; Şimşek, 2007). The results of the overall CFA showed an acceptable fit with the data, and other goodness-of-fit statistics (RMSEA= .07) was obtained. Standardized coefficients from items to factors ranged from 0.52 to 0.87. The results for the CFA indicated that the relationship between each indicator variable and its respective variable was statistically significant (p<.01), establishing the posited relationships among the indicators, showing convergent validity (Hair, Black, Babin, & Anderson, 2010, p.724). Hair et al. (2010, p.721) stated that when normalized chi-square X²/df' is below Table 2, the model has very high goodness-of-fit, and when it is below 5, the model is acceptable. In addition, it was indicated that the model can be accepted when the RMSEA value is under 0.10 (p<.05). With that respect, it can be concluded that the goodness-of-fit statistics (χ^2/df=2,25, sd=142, RMSEA=0,067, GFI=,94, CFI=0,92, AGFI=,91) of the psychological safety variable (model) is within acceptable values based on the implications of Hair and colleagues (2010, p.721) and Kline (2011, p.134). Moreover, to confirm the internal consistency of the research scale, Cronbach's alpha value was evaluated to see if the scale items were measuring the same construct and have highly intercorrelations. The results revealed that the reliability values were above 0.80 showing that all items were interrelated (Hair, Black, Babin, & Anderson, 2010).

The documented results of CFA of psychological safety is presented in Table 2. Figure 1 shows the CFA model of psychological safety scale.

Table 2: Fitness Indices of Study Variable Based on CFA

Fitness indices	Psychological Safety	Principle
Chi-square/df	2.2553	< 3
P-value	0.00	< 0.05
RMSEA	0.067	< 0.10
GFI	0.94	> 0.9
CFI	0.92	> 0.9
AGFI	0.91	> 0.9

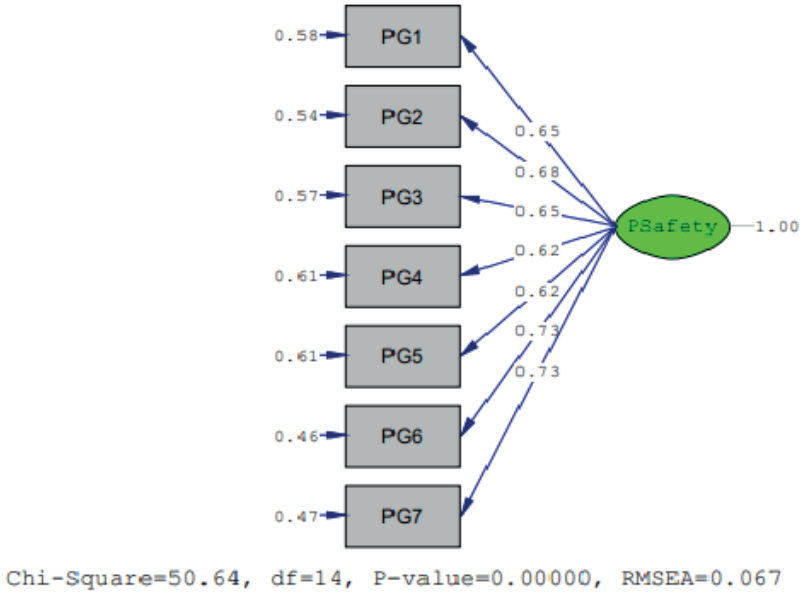


Figure 1: Standardized Solution Model of Psychological Safety Scale

Furthermore, the construct reliability of the psychological safety scale was 0.85, indicating internal consistency of the dimension. Average variance extracted (AVE) shows the overall amount of variance accounted for by the latent construct. A level of 0.50 or above, and 0.45 for new scales, is acceptable (Netemeyer, Bearden, & Sharma, 2003). As it can be seen from Table 3, the AVE's was above 0.45.

Table 3: Construct (Composite) Reliabilities and Explained Variances for the Psychological Safety Scale

Construct	Item number	Cronbach Alpha	Construct reliability	Average Variance Extracted
Psychological safety	7	0.87	0.85	0.55

In sum, the suggested one-factor measurement model fit with the data. Compared to the criteria given above and the resulting congruence coefficients, the corresponding items of the scale concluded that a model of psychological safety has been validated. Further findings showed that some of the items had relatively higher meaning than others (see Table 3). Interestingly, perceptions regarding a team member's deliberately undermining attitudes and behaviors for one's efforts affected psychological safety mostly (M= 3.84, SD= 1.112). Likewise, valuing one's skills and talents had the second-highest meaning in the overall construct (M= 3.78, SD= 1.165).

Table 4: The Descriptive Results of the Items of the Study Variable

Psychological Safety Items	Mean (M)	Std. Dev.(SD)	Factor Loadings
1. If you make a mistake on this team, it is often held against you. *	3.36	1.335	0.65
2. Members of this team are able to bring up problems and tough issues.	3.62	1.173	0.68
3. People on this team sometimes reject others for being different. *	3.67	1.219	0.65
4. It is safe to take a risk on this team.	3.28	1.277	0.62
5. It is difficult to ask other members of this team for help. *	3.72	1.285	0.62
6. No one on this team would deliberately act in a way that undermines my efforts.	3.84	1.112	0.73
7. Working with members of this team, my unique skills and talents are valued and utilized.	3.78	1.165	0.73

Note: N=585, *The items were transformed to positive statements.

5. Discussion and Conclusion

In today's business life, psychological safety is an important concept to understand employees' attitudes towards accomplishing tasks, attaining common goals, and expressing oneself (Edmondson, 1999; Edmondson & Lei, 2014). Psychological safety (Edmondson 2003), which refers employee's perception of the consequences of risks undertaken in the work environment is crucial for employee performance and engagement in work processes. Psychological safety perception in the workplace would have a reflection on the work quality of the individual and performation in the organization, especially during the incidents that require urgent decision-making and when employees are in direct contact with other individuals (e.g., co-workers, customers, etc.). In this respect, determining individuals' psychological safety is worthy for better organizational and individual outcomes.

Considering that employees' perception of psychological safety is gained through experiences (Edmondson, 1999), it is expected that this perception is positive. Since psychological safety can be expected to reflect on the job quality of individuals, an individual's performance will increase. Likewise, in a learning organization, the organization will benefit from the positive results of psychological safety as it is displayed in a positive employee attitude towards identifying mistakes in order to actively correct them (Rybowiak, Garst, Frese, & Batinic, 1999; Senge, 1990). Hence, understanding the psychological safety of individuals and objectively evaluating it is important for today's work conditions. Depending on this rationality, the current study was carried out in order to determine the perceptions of psychological safety of employees working in different organizational settings in Turkey. The study aimed to assess the reliability and validity of the psychological safety scale through extended research. Taken together, the results obtained in the current study suggested that the psychological safety scale is a valid and reliable measurement tool to show individuals' perceptions about interpersonal risks in their workplaces. More importantly, this study presented a comprehensive review and quantitative empirical evidence on psychological safety in organizations of Turkey. Another result of this study is that perceptions about whether team members value one's effort and appreciating her/his skills and talents had the highest meanings in the overall construct, respectively (M = 3.84, SD = 1.112; M = 3.78, SD = 1.165). This evidence is consistent with İşiaçık (2019) and Taştan and İşiaçık (2020)'s research, which the item "Working with members of this team, my unique skills and talents are valued and used," had the highest factor loadings in the psychological safety scale. However, the reversely coded item

that was turned to a positive statement for the research, "people on this team sometimes reject others for being different," had another highest factor loading in the mentioned research. Hence, it may be assumed that individuals have also given importance to being accepted for who they are in order to feel psychologically safe. Differently, feeling psychologically comfortable when asking for help and being able to bring up problems and tough issues showed the highest value in Üçok (2016)'s research when factorial structure of the scale is investigated. The reason for the mentioned differences may come from the unique characteristics of the sample in the current study. Although the study attempted to reach a larger sample size for this research, the sample is still biased due to its properties of consisting of relatively young and highly educated participants. Future research may reach a wider range of participants who differ in terms of demographical characteristics to unveil the crucial perceptions regarding the psychological safety of individuals in Turkey. By that, the organizational practices and interventions that aim to improve psychological safety can be formed in a more accurate way, and the cultural and socio-economical mechanisms behind psychological safety can be understood better. Also, some psychological factors (e.g., personality and individuals' mental wellness) and environmental effects (e.g., leader behaviors and sector-specific behavioral patterns) were not examined because of the scope of the study. Future research should highlight the moderating role of them.

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Appendix: The Scale Items Used in the Research Study

1 Bu işyerinde bir hata yaparsanız, bu tüm çalışanlar tarafından aleyhinizde kullanılmaz.

2 Bu işyerinde çalışanlar karşılaştıkları problemleri açıkça dile getirirler.

3 Bu işyerinde çalışanlar, diğer çalışanların fikirlerine sırf farklı oldukları için karşı çıkmazlar.

4 Bu işyerinde işlerin yürümesi için hesaplı risk alınabilir ve sonunda çalışan zarar görmez.

5 Bu işyerinde çalışanlardan kolayca yardım istenebilir.

6 Bu işyerinde hiç kimse benim çabalarımı kasıtlı olarak engelleyecek şekilde davranmaz.

7 Bu işyerinde insanlar ile çalışırken, bana, özel beceri ve yeteneklerime değer verilir.