

# **Linking Transformational Leadership and Individual Learning Behavior: Role of Psychological Safety and Uncertainty Avoidance**

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## **Abstract**

The personal learning cloud is reshaping companies across industries despite the vast gap in the locus of knowledge acquisition and locus of knowledge application. While knowledge and best practices become moving targets, the modern-organizations have swiftly moved to psychological safety culture that fosters growth, innovation and individual learning. In context, transformational leadership fosters innovative behaviors and learning abilities, successful organizational transformations and effective actions for performance beyond expectations. Hence, the study aims is to examine the impact of transformational leadership on individual learning behavior, under mediating conditions of psychological safety and moderating influence of uncertainty avoidance. Using partial least squares (PLS) based structural equation modeling (SEM) and survey of 350 telecom-employees, the results reveal that transformational leadership and individual learning behavior relationship is partially mediated by psychological safety. Alternatively, uncertainty avoidance reveals an insignificant role as a moderator. Our findings generate managerial implications for advancing individual learning cultures and guiding continuous improvements in diverse work settings. In line with the theoretical base of “too much of a good thing (TMGT) effect”, our study highlights potential avenues for future research to explore the dark side of psychological safety and its counter-productive effect on workplace behaviors.

**Keywords** Transformational leadership, individual learning behavior, uncertainty avoidance, psychological safety, telecom sector and Pakistan.

## **1. Introduction**

Modern organizations in the increasingly dynamic and competitive environment gain success by some major breakthroughs in developmental advancements relying upon continuous improvement, learning, innovation and effective leadership. As the innovative capacity of organizational processes remain marginal (Mastio, 2019; Mendenhall et al., 2017; Örtenblad, 2018), the organizational learning behavior becomes crucial in advancing systematic process to adapt to environmental threats and sustain competitive position (Ocasio et al., 2020). Moreover, the learning process is considered to have

fruitful effect on organizational performance despite its challenging and tough nature (Mastio, 2019; Ocasio et al., 2020). However, in order to stay abreast of changing market trends and technological revolution, learning behavior is vital for organizations (Ocasio et al., 2020). The worldwide telecommunication industry has stayed remarkable throughout the most recent decade, basically as a result of technical and industrial advancements and emerging demand of android phones.

Similarly, the telecommunication industry of Pakistan has also developed due to easing trade and investment, vigorous competition and friendly policies. The economy of Pakistan has grossed monetary, economic and societal reimbursements from the telecommunication sector during the last decade. As of December 2019, the telecom sector in Pakistan has achieved a customer base of subscribers for cellular services (165 million), 3G/4G services (76 million), basic telephony (3 million) and broadband services (78 million) respectively. As the Pakistani telecom industry has transitioned from a state-owned regulated monopoly to a much deregulated and competitive telecom structure, it had recently attracted US\$ 288 Million of foreign direct investments (PTA, 2019). Despite showing significant growth figures, the telecom infrastructure in Pakistan has not maintained a fair economic growth due to the inconsistent learning behavior and uncertain avoidance culture (Afsar & Masood, 2018; Imtiaz et al., 2015; Lawrie et al., 2020).

In dynamic organizational conditions, transformational leadership emerges as an effective leadership style for fostering change (Zaman et al., 2019b) and to stimulate learning in which the conventionality is challenged (Vera & Crossan, 2004). If the managers aim for their employees to progress and accomplish their mission, they first help them in attaining new information pertinent to the needs and integrate them within their processes and operations. Hence, the constant need for change and development has evolved attention in the area of organizational learning (Kumar & Ganesh, 2011; Mastio, 2019; Örtenblad, 2018). In the context of Pakistan, due to the culture of dictatorship and prevalence of anxiety and stress, the tolerance towards negative behavior, conflict and resentment is high. Uncertainty avoidance is fairly related to psychological safety owing to the focus on uncertainty, tolerance, threat and challenging status quo (Frazier et al., 2017). A culture having high uncertainty avoidance often has a counter effect on work related outcomes and psychological safety as compared to low uncertainty avoidance culture (Afsar & Masood, 2018; Sherf et al., 2020). A culture with high uncertainty avoidance shows inclination towards formal rules and instructions (Hofstede, 2001). Psychological safety has also gained significant interest by scholars and practitioners (Yin et al., 2019) as it permits employee “to feel safe at work in order to grow, learn,

contribute, and perform effectively in a rapidly changing world” (Edmondson & Lei, 2014).

Regardless of the increasing support and experimental work for investigating psychological safety at work (Zeng et al., 2020), the concept has still received limited attention and some significant questions are yet to be explored for further understanding the effect of psychological safety (Sherf et al., 2020). Hence, there is a need to fill the gap by addressing the shortcomings and extend the existing research on the construct of psychological safety. Therefore, current research investigates the impact of transformational leadership and uncertainty avoidance on individual learning behavior under mediating conditions of psychological safety. Moreover, it is vital for telecommunication sector to flourish the concept of psychological safety in the workplace (Zeng et al., 2020), to capture an environment and culture of continuous learning and information sharing, that encourages organizations to maintain core competencies and outperform as a learning organization (Mastio, 2019; Mendenhall et al., 2017; Örtenblad, 2018).

## **2. Literature Review**

### *2.1 Transformational Leadership*

Transformational leadership has been initially defined by Bass (1990). Idealized influence or charisma is the first factor in the definition by Bass for explaining transformational leadership. It means leaders act as role models for their followers and they have high ethical standards and moral conduct. The second factor is inspirational motivation that describes communication of a shared vision and motivation to the followers for their own self-development and organizational growth. The third factor is intellectual stimulation that encourages innovation and creativity amongst followers. It is an element that initiates reasoning and vigilant problem solving with the help of the transformational leader. The fourth factor of transformational leadership is individualized consideration. In this role the leaders acting as mentors, coach and advisors, they pay special emphasis towards the follower’s personal needs (MacKenzie et al., 2001, Zaman et al., 2019b).

It is argued that the transformational leadership style is distinct from other typical leadership paradigms (Kim et al., 2019; Zaman, 2020). The transformational leaders belong to the heroic or charismatic leadership paradigm, hence they exhibit qualities such as ethical standards, change agents, motivators, charismatic, and compassionate (Zaman et al., 2019b; Zaman et al., 2020). The transformational leaders are recognized for their

unique traits and tactics other than the transactional leadership style that is merely based on exchange relationship with their followers (Zaman, 2020; Zaman et al., 2020). According to Bennis and Nanus (1985), the transformational leaders can be identified and differentiated on the basis of four features. First, they possess clear vision and mission. Second, for facilitating the change process they have effective communication skills. Third, they are consistent in their attitude and behaviors, hence, resulting in winning the trust and respect from their followers. Lastly, they have a high degree of self-efficacy and self-awareness (Zaman et al., 2020).

### *2.2 Psychological Safety*

Schein and Bennis (1965) pioneered the psychological safety concept and defined it as a complex part of the unfreezing process that is essential for organizational learning and change. The authors suggested that psychological safety diminishes fear perceptions, eliminate obstacles to change, encourages provisional ties and create tolerance towards failure without fear of guilt, renunciation or retaliation (Schein and Bennis, 1965). Other studies defined psychological safety as the feeling of showing one's self without fearing negative consequences towards career, self-image and status (Kahn, 1990).

As viewed by Edmondson (1999), psychological safety plays a central role in activating learning within organizations at both individual and group levels. At the group level, psychological safety is a source of providing support and healthy climate that results in improving innovation and creativity within entire team. In the environment of psychosocial safety, the individuals feel safe, fearless, and they are encouraged for recognizing their capabilities and unique skills (Cannon and Edmondson 2001). Psychological safety activates reflection, cognitive and unique thinking abilities within group and individuals that lead to better performance, learning behavior and outcomes (Edmondson, 1999; West 1996).

### *2.3 Individual Learning Behavior*

Learning behaviors in organizations is referred as a process of, “regularly pursuing new information, speaking up to assess the strength of work assumptions and allocating time in figuring out ways to advance work processes along with capturing the enduring process of reflection and action (Edmondson, 1999) through which knowledge is assimilated, shared and combined” (Argote, 1999; Argote et al., 2001). When the management of human resource started receiving scholarly attention, the first thing established regarding workforce development was employee behavior in an organization and leadership response. The perspective was to make the organization a learning organization, and for this process the two important factors are the individual approach

towards learning and the other is organizational level learning (Schweder, 2020; Yadin & Or-Bach, 2019). Distinct focus is required for learning at individual level as it is the social factor which is affected by its surroundings and culture. This approach fosters learning, information seeking behavior, knowledge simulation, improvement and advancement of work processes at the individual level (Argyris & Schön, 1978; Cook & Yanow, 1993; Kolb, 2001; Senge, 2006). Along with the individual learning, organizational learning and its importance was another important factor which was debated during the primary phase of development. It was the idea that learning should be at organizational level, and for that organizational learning systems should be established and strengthened (Cook & Yanow, 1993; Schweder, 2020; Senge, 2006; Yadin & Or-Bach, 2019).

#### *2.4 Uncertainty Avoidance*

Uncertainty avoidance involves the degree of individuals' feelings about being fearful of complex, unknown and/or uncertain situations" (Afsar & Masood, 2018; Patterson & Smith, 2001; Lawrie et al., 2020). The concept of uncertainty is based upon "a situation in which anything can happen to anyone and one cannot predict or control it" (Hofstede, 2001). Among all other Hofstede's cultural dimensions such as power distance, collectivism, and masculinity, the uncertainty avoidance culture has gained recognition by scholars and academicians (Afsar & Masood, 2018; Lawrie et al., 2020; Wang, 2018; Watts et al., 2020). The scope of uncertainty avoidance as a moderator is highly significant pertaining to cross-cultural research (Liu et al., 2010). Key features of culture having high level of uncertainty avoidance are; (1) less common voice behaviors among employee, (2) low flexibility and more inclination towards formal rules and work schedules, (3) experimentation or creativity is less common, and (4) people are less engaged in seeking information, and learning at their own (Lawrie et al., 2020; Wang, 2018; Watts et al., 2020). Therefore, the social costs of speaking out, challenging the status quo, risk taking are high (Afsar & Masood, 2018; Friedman et al., 2006; Watts et al., 2020).

#### *2.5 Theoretical Gap*

Various research attempts have been made to examine outcomes pertaining to organization, team, and individuals in attitudinal, behavioral and emotional dimensions (e.g. work engagement, organizational commitment, employee motivation, organizational learning, organization citizenship behavior, and organizational performance). However, the role of individual learning has been marginalized as an outcome of leadership

behavior and psychological safety (Chamberlin et al., 2017). Hence, the present study focuses on exploring the behavioral dimension such as individual learning behavior as a criterion variable in relation with transformational leadership and psychological safety. Moreover, another important contribution of the current research is studying the role of uncertainty avoidance in the context of Pakistan's telecom sector. As the people tend to show high uncertainty avoidance, hence, it is another significant gap in the literature of leadership and psychological safety (Pacheco et al., 2015).

A meta-analysis carried out by Frazier et al. (2017) provided a psychological safety comprehensive assessment, involving antecedents and outcomes. The findings provide preliminary support regarding the role of culture in psychological safety, and promote future research to explicitly investigate the issue in countries having a culture of high uncertainty avoidance (Frazier et al., 2017). Therefore, the present research initially highlights the research gap and then examines psychological safety under the moderating influence of uncertainty avoidance. The current study tends to answer another important question that has remained unattended in the literature is by what mechanism leaders may affect the learning behavior of employees. Therefore, it is the situational factor i.e. psychological safety that facilitates the learning potential of individuals (Schweder, 2020; Yadin & Or-Bach, 2019).

Newman et al. (2017) did a conceptual study that addressed the issues in the existing literature, and provided new avenues for future studies. The research further suggested to investigate the role of leadership in relation to psychological safety (Newman et al. 2017). There is a slight difference in the extent each of the leadership constructs impact psychological safety, an emerging area to which the scholars have recommended to focus in the future research. Hence, the current research only focuses on the transformational leadership in relation to psychological safety and individual learning behavior, and suggests inclusive leadership for future research avenues. (Frazier et al., 2017; Liu et al., 2010). Importantly, as social learning and social network theories suggest that individual learning behavior is an outcome of interactions among social actors, that facilitates knowledge acquisition and adaption of new behaviors (Bandura & Walters, 1977; Krause et al., 2007). Hence, an inquiry becomes critical to understand the linkages between transformational leadership and individual learning behavior under influence of psychological safety and uncertainty avoidance. Moreover, the social contagion theory also reinforces the impressions of transformational leadership on individual learning behavior, as the followers develop the propensity to adapt to those behaviors exhibited by their leaders (Christakis & Fowler, 2013).

### *2.6 Contextual Gap*

Duan et al. (2017) examined the linkage between transformational leadership and employee voice in Chinese firms representing multiple industries, e.g. manufacturing, technology and finance etc. The authors called for a similar research to be undertaken in other cultural settings. However, the current research is filling this contextual gap by examining the same variables and their implications in the context of Pakistan's telecom sector. Several studies have focused on the emerging problem of learning behavior process in manufacturing, services and telecom sectors (Rasheed et al., 2012; Yuniarto & Tjakraatmadja, 2017). The study findings validate the problems associated with learning behavior that prevails in the telecom sector, attracting further improvements through scientific inquiry. Hence, individual learning behavior has to be taken into account for further investigation in the telecom sector in Pakistan. The research carried by Frazier et al. (2017) and Newman et al. (2017) categorically stressed upon examining the impact of uncertainty avoidance in the cultures having high index of uncertainty, as it is assumed to undermine the psychologically safe climate in the workplace. Therefore, the present research fills the existing gap in the area of psychological safety by examining the moderating role of uncertainty avoidance in telecom sector in Pakistan.

### *2.7 Transformational Leadership and Individual Learning Behavior*

Avolio et al. (1999) proposed that in order to influence the group's and individual's development related work processes, the five facets and/or four behavioral constituents of transformational leadership can prove very effective. As identified by Berson and Avolio (2004), to achieve higher performance, motivation is the main factor, and to motivate groups to attain high level performance, practical and effective form of leadership is critical. Transformational leadership style is justified and more suitable for motivating employees, as suggested by some famous transformational leadership theorists (Bass et al., 2003). The typical characteristics of transformational leadership lead to motivate the groups and individuals to attain greater performance (Zaman et al., 2019b).

Transformational leaders exert their inspirational capabilities like influencing, challenging and encouraging in order to motivate employees for a greater level of success. For instance, employees can improve their skills needed at their workplace through experiential motivation, skills and capabilities in making right and efficient decisions at individual level, and further improved through intellectual stimulation (Wong et al., 2010). Moreover, transformational leadership gives quick response during challenging and changing circumstances that make transformational leadership

characteristic more preferable for learning organizations (Bass et al., 2003). Therefore, it can be said that transformational leadership style; due to its suitable characteristics, may be more helpful and fitting in prompting employees to change through organizational and individual learning (Zaman et al., 2020).

Productive relationships can be established through transformational leaders, according to latest research (Bono & Anderson, 2005). Leaders set their examples and let the followers to support and learn from each other while getting the work done. These types of actions facilitate unique learning experiences for employees and helps them in growing together as a single unit. Organizations gather individuals to make groups and follows the mutually shared cultural approach (Cook & Yanow, 1993). It has been suggested that learning in groups is more favorable and effective as compared to individual level, as working in groups enables everyone to get equal amount of shared knowledge and thus produce something more acceptable and intellectual. Yet, the current research is undertaken to analyze the effect on individual learning behavior. Researchers have been interlinked leadership style and learning organization's culture more often. Hence, capable leader can provide the influential atmosphere for the followers to learn (Rijal, 2010; Sahaya, 2012; Zaman, 2020, Zaman et. al, 2019b). Therefore, it can be said that any organization can develop learning behavior and motivate learners through transformational leadership style (Kim, 2011; Zaman et. al, 2019b). Role of leadership and individual learning depends on each other, efforts of transformational leader in making an organization a learning one, is vital (Loon et al., 2012). Therefore, the first hypothesis is stated on the basis of the above arguments.

- **H<sub>1</sub>:** Transformational leadership has a significant and positive impact on individual learning behavior.

#### *2.8 Transformational Leadership and Psychological Safety*

Leaders are seen to have positive impact on the perception their subordinates have of psychological safety (Kahn, 1990; Edmondson, 1999). It is therefore necessary for employees to have strong and positive relationships with their leaders as this leads them to have access to the necessary information, resources, support, trust, consistency, and competence (Kahn, 1990). When it comes to what is acceptable and what is an appropriate behavior between the leaders and followers, the social exchanges have a lasting impact on formalization of these expectations (Edmondson et al., 2004). Thus, it makes sense to see how various forms of leadership, such as transformational leadership, ethical leadership, leader member exchange, managerial orientation and trust in leader, acts as predecessors of psychological safety (Coombe, 2010; Detert & Burris, 2007;

Halbesleben & Rathert, 2008; Madjar & Walters, 2009; Walumbwa & Schaubroeck, 2009). Tynan (2005) argued that the reliable and significant predictor of individual's psychological safety at workplace is leadership. Kahn (1990) supported the same notion and stated that leadership behavior supports open communication which may have a positive effect on employ psychological safety. May et al. (2004) also support this idea that in individual's psychological safety, leader's role is significant? Walumbwa and Schaubroeck (2009) pointed that transformational leadership style towards individuals, encourages them to learn from their mistakes, and grow while they feel psychologically safe (Wanless, 2016).

Transformational leaders contribute in establishing the environment that is most suitable for learning (Isaksen & Akkermans, 2011). Precisely, such leaders encourage psychological safety which enables employees to express their thoughts openly, which motivate them to grow by taking risks and seeking new experiences (Wanless, 2016). Transformational leaders influence followers by setting extraordinary goals and acting like exemplary role models (Zaman et al., 2019b) as they possess "transformational effects" through interaction with the employees (Zaman et al., 2020), which boosts their confidence and encourage them to improve their performances to higher level. Therefore, in this way, transformational leaders transfer their positivity to the subordinates, that results in overall lifting up the self-esteem of the followers and motivate them to express themselves better than before (Zaman et al., 2019b; Zaman et al., 2020). Other researchers have argued that when a leader is focused on employee's individual performance through motivational considerations that contributes in boosting up their psychological safety (Carmeli et al., 2014; Detert & Burris, 2007). Hence, the second hypothesis is stated based on grounds of the above discussion.

- **H<sub>2</sub>:** Transformational leadership has a significant and positive impact on psychological safety.

### *2.9 Psychological Safety and Individual Learning Behavior*

Earlier studies have made significant contributions in examining the psychological safety construct, including its impact in different work settings (Edmondson, 1999; Schein and Bennis, 1965). According to Edmondson (1999) and Kahn (1990) psychological safety is an intellectual state, which is deemed necessary for acquiring new knowledge and bringing about change. From this perspective, various behavioral outcomes might occur, such as sharing information, creativity, learning attitudes and behaviors, and having organization citizenship. An empirical study by Choo et al. (2007) investigated the

relationship between psychological safety and its potential consequences such as learning, knowledge creation, and performance. The research was undertaken using a web-based questionnaire comprising 951 team members and 206 projects in the manufacturing industry. The research concluded that the psychological safety stimulated knowledge creation and quality improvement, but not the learning behavior. However, it is argued that an organization with psychological safe environment encourages creativity, risk taking, critical thinking and enhances exploitative and exploratory learning that subsequently promotes team performance. Therefore, the current research proposes that psychological safety affects individual learning behavior in order to test the significance in the context of Pakistan telecom-sector (Edmondson & Lei, 2014).

Sanner and Bunderson (2015) further explored the variable of psychological safety by identifying the factors that enable or hinder the work outcomes. However, a meta-analytical review of 39 studies adopted a quantitative approach for analyzing team learning and team performance from a psychological safety perspective. The results indicated a significant relationship between psychological safety and learning behavior as explained in the literature, yet it specified that the degree of the causal relationship between the two vary across studies. Psychological safety is commonly known to be associated with organizational learning. As in the present organizational setting learning takes place as a social process among greatly dependent communities and members, Edmondson and Lei (2014) argued that there are some factors in the contextual environment that inhibit individual learning behavior such as fear of failure, interpersonal risk, learning anxiety and incompetence. Therefore, the result suggests that a climate of psychological safety mitigates the threats and risks in seeking learning behavior. If the employees feel comfortable in organization their probability of offering new ideas increases along with seeking help, providing feedback and admitting errors (Kumako & Asumeng, 2013). Therefore, the third hypothesis is specified on the basis of this argument.

- **H<sub>3</sub>:** Psychological safety has a significant and positive impact on individual learning behavior.

One of the behavioral outcomes that have been identified in earlier researches is that of learning behaviors (Schein & Bennis, 1965; Edmondson, 1999). The effect of psychological safety has been considered important not only from the perspective of individual learning (Carmeli & Gittell, 2009) but group learning as well (Edmondson, 1999; Wong et al., 2010). A workplace which is safe psychologically provides the employees with an environment in which they do not have to face fear of failing at anything or anxiety, existence of which can hinder learning (Frazier et al., 2017, Newman

et al., 2017). Various studies have examined the intervening role of psychological safety in relation to leadership, organizational, and team characteristics. Some studies have highlighted the importance of leadership as a mechanism of trust and psychological safety along with organizational level outcomes like as performance and learning at individual level. Carmeli et al. (2012) carried out a research in Israel including multiple industrial sectors stated that the relational leadership enhances psychological safety and strategic decision making, and further identified the mediating role of trust or psychological safety between leadership and learning from failures (Edmondson & Lei, 2014).

A transformational leader provides the followers individual consideration, idealized influence, inspirational motivation, and intellectual stimulation that lead to their performance improvement and development (Avolio et al., 1999). Moreover, other researchers also argued that the leaders exhibiting transformational behaviors facilitate the followers in decision making, strategic goals achievement, and team learning (Sarin & McDermott, 2003; Edmondson, 2003). Earlier researchers have consensus over the role of transformational leadership as a critical stimulator of team learning among work groups due to the strong association of their attitude and actions in creating a psychologically safe environment. Moreover, a direct link between transformational leadership and individual learning behavior has been identified as the leaders are involved in constructing a learning process within their organizations (Kumako & Asumeng, 2013).

Nembhard and Edmondson (2006) also reported in their study that transformational leadership behavior's scope is not just limited to coaching, motivating and inspiring employees rather it influences their learning and performance in order to advance their overall potential. However, this side of the leadership behavior as a potential predictor of psychological safety along with facilitating ongoing learning process provides a new insight for scholars and practitioners (Kumako & Asumeng, 2013). Therefore, on the basis of above argument the fourth hypothesis is proposed

- **H<sub>4</sub>**: The relationship between transformational leadership and individual learning behavior is significantly mediated by psychological safety.

#### *2.10 Transformational Leadership, Psychological Safety and Uncertainty Avoidance*

It is evident from research that leadership exists in all cultures and societies leadership (Hater & Bass, 1988; Fiol et al., 1999). However, the researchers explored the personal characteristics of transformational leadership in diverse cultures to determine the quality

of leadership, and it is essential for the organizations to recognize the potential of leaders. These researchers reported that the transformational leaders have divergent aspects and characteristics owing to the differing cultural profiles, because the societies and cultures have unique conceptions for effective leaders (Bass, 1990; Hofstede, 2001).

Understanding psychological safety in various cultures would require extensive work and research settings (Edmondson & Lei, 2014), as mainstream research on psychological safety and its impact has been studied in context of Western nations (e.g. United States). These cultures are mostly described by low levels of uncertainty avoidance (Hofstede, 2001). These cultures allow the individuals to be more vocal when it comes to expressing their ideas and engaging in various experiments, even without psychological safety. Thus, the impact of psychological safety on work related outcomes such as performance, individual learning behavior and innovation, could be more explicit for individuals working in organizations having a high level of uncertainty avoidance. This is due to the fact that employees are less empowered to express their ideas and beliefs, as they tend to have higher social costs, causing employees to lose face or be criticized by peers (Dong & Liu, 2010).

Despite this, significant research on psychological safety has been carried out in cultures where uncertainty avoidance is low (Edmondson & Lei, 2014). High level of uncertainty avoidance might have a counter the effects of psychological safety on work related outcomes. Those cultures with high uncertainty avoidance showed that effects of positive leadership were weak. This is due to the fact that in cultures where uncertainty avoidance is high formal rules and regulations tend to be valued more (Hofstede, 2001), thus to feel high level of psychological safety in these cultures the signals might have to come from a broader range. This shows that employees working in cultures with higher uncertainty avoidance tend to be more perceptive to issues regarding personality, work related support, and work design, rather than to behavior of autocratic leaders. This could also be because in such cultures the leaders tend to be more controlling, distant and difficult to approach.

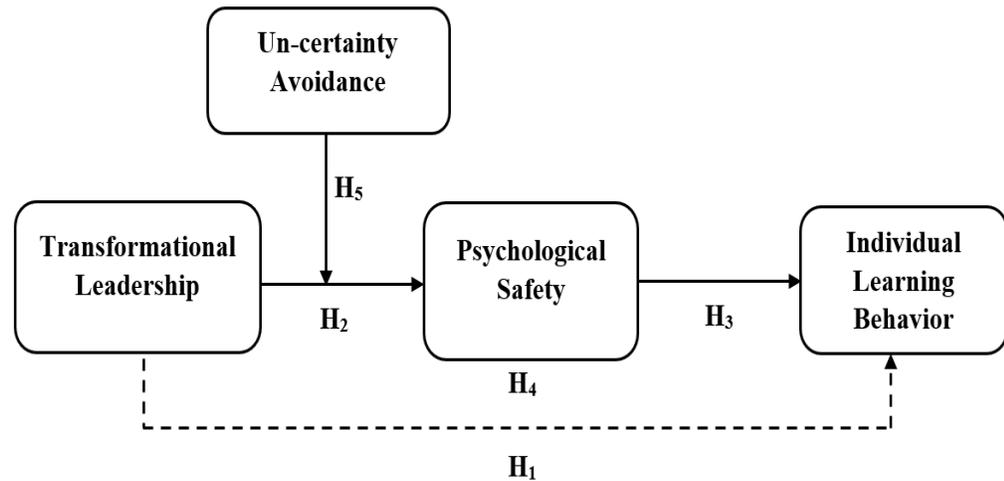
It is assumed that employees may feel hesitant to provide feedback, interrogate, or freely contradict their supervisors, as the culture does not support these behaviors. However, the current research draws on the research call on the boundary conditions of psychological safety as it is marginalized in the context of Asian countries (Frazier et al., 2017). Similarly, cross-cultural comparison on the effects of psychological safety on work outcomes has scope for future research by explaining the intervening variables i.e. extra role behavior or employee voice behavior etc. In order to explore more influential conceptual models and theoretical bases that have strong predictive values (Kozlowski &

Ilgen, 2006). However, the existing relationship of transformational leadership and psychological safety is already established, but there is a need to investigate variables that can account for buffering relationship between leadership behaviors and psychological safety by testing for moderation hypothesis. Hence, the researcher proposes this hypothesis:

- **H<sub>5</sub>:** The relationship between transformational leadership and psychological safety is significantly moderated by uncertainty avoidance.

Based on review of mainstream literature, the conceptual model (shown as Figure 1) represents the impact of transformational leadership on individual learning behavior under moderating influence of uncertainty avoidance and mediating condition of psychological safety.

**3. Theoretical Framework**



**Figure 1: Moderated-Mediation Model of Individual Learning Behavior**

**4. Methods**

The research study approach is exploratory, explanatory and deductive in nature. Additionally, a positivism research paradigm has been followed. The research study facilitates conformity with the causal relationship between variables that are usually effective and results can be generalized for prediction and forecasting (Zaman, 2020).

Hence, the population for this research study included telecom sector employees in Islamabad in a structured setting to gain accurate empirical interpretations. The telecom sector was considered more suitable for examining the impact of transformational leadership on individual learning behavior under mediating condition of psychological safety and moderating role of uncertainty avoidance. The partial least squares structural equation modeling (PLS-SEM) empirically tested the conceptual model, as the technique has received cross-disciplinary recognition for superior predictive capabilities over CB-SEM (i.e. composite based SEM), especially for advance level SEM analysis that involves mediating as well as moderating hypothesis (Hair et., 2014; 2011; Zaman et al., 2020).

#### *4.1. Sampling and Data Collection*

Owing to time, accessibility and budgetary constraints, convenience sampling has been adopted for the current research study (Zaman et al., 2020). Convenient sampling approach has been driving scientific research in social sciences for decades (Leiner, 2014) with an overwhelming bulk of published research in mainstream journals (Zaman, 2020; Zaman et al., 2019ab). Importantly, non-random (i.e. convenient) sampling is more feasible in non-systematic situations where locating and accessing the whole population is extremely difficult (Elfil & Negida, 2017). Deming (1966) supported the notion of convenience sampling and argued there can be great significance in analyzing quantitative data even when the data is not a truly random sample of a population. For achieving the recommended sample size for producing reliable study results (Hair et al., 2014; 2011), a total of 600 survey forms were distributed to certify adequate data collection from telecom sector employees in Islamabad. Importantly, the survey was circulated across companies that hold major market share in the telecom sector in Pakistan, including Telenor (27.63%), Zong (21.64%), PTCL Ufone (14.16%) and Mobilink Jazz (36.58%) respectively, to secure reasonable assurance for the sample to be representative of the population (Krejcie & Morgan, 1970, PTA, 2019). In addition, the recommend sample size for SEM (Hair et al., 2014) facilitated reasonable prediction of the telecom sector in Pakistan (Krejcie & Morgan, 1970).

Out of 600, 58% of the questionnaires were returned, yet contributing to 350 as the sample size of the current research study. The data for the present study has been collected at one point of time, therefore cross-sectional research design is undertaken. Survey based questionnaire (i.e. self-administered) has been circulated among the employees of telecom sector in Islamabad for collecting data. The demographics of study participants showed that a large majority of respondents were males (i.e. 58.3%) followed by females (41.7%). Almost thirty-three percent of the respondents were below 25 years

of age, followed by 30.3% (between 26-35 years), 15.4% (between 36-45 years), 9.4% (between 46-55 years) and 11.7% were above 55 years. The highest education level of the respondents was doctorate (1.7%), followed by MPhil (13.1%), Masters (37.4%) and Bachelor's degree (47.7%). The respondent with highest experience ranging above 20 years were 2.6%, followed by 2.9% (between 16-20 years), 4.3% (between 11-15 years), 15.1% (between 6-10 years), 34.6% (between 2-5 years) and 40.6% of the respondents had experience less than one-year.

#### 4.2 Pilot Testing of Instrument

For this research an initial pilot test is undertaken on a sample of 30 in order to examine the reliability of questionnaire. Table 1 shows the results of pilot test. Nunnally (1978) has argued on the acceptable range of Cronbach's alpha i.e. above 0.60 to confirm reliability of the measures. Using the survey-based sample data ( $n=30$ ) for preliminary analysis, a pilot test was conducted to establish reliability of used measures. Table 2 shows the reliability statistics of all measurement instruments used for this study. Transformational leadership was measured by 20 items and the measurement scale reported adequate reliability ( $\alpha = 0.876$ ). Psychological safety was measured by using 5 items and the calculated values confirmed acceptable reliability ( $\alpha = 0.724$ ). Learning behavior was measured while using 7 items and the calculated values confirmed the reliability of the measure ( $\alpha = 0.731$ ). Lastly, uncertainty avoidance was measured by 4 items in total and the calculated reliability value was within the acceptable range ( $\alpha = 0.637$ ).

**Table 1: Reliability Statistics**

Name of Variable	Cronbach's Alpha	No of Items
Transformational Leadership	0.876	20
Psychological Safety	0.724	5
Learning Behavior	0.731	7
Uncertainty Avoidance	0.637	4

### *4.3 Instrumentation*

#### 4.3.1 Transformational Leadership

Transformational leadership was assessed by using a Multifactor Leadership Questionnaire (MLQ 5X-Short) that comprises of 20 items (Bass & Avolio, 1995). Sample items include: “My supervisor displays a sense of power and confidence, and my supervisor talks about most important values and beliefs”. The Cronbach’s alpha for the transformational leadership measure reported 0.796.

#### 4.3.2 Psychological Safety

Psychological safety was measured by averaging 6 items based on Edmondson’s (1999) work. The items evaluate whether the individual feel contented and express their opinions at work or whether there is an intimidating environment at work. The Cronbach’s alpha for the psychological safety measure reported 0.786.

#### 4.3.3 Individual Learning Behavior

A scale constructed by Edmondson (1999) was used to measure individual learning behavior. Sample items contain: “I regularly take time to figure out ways to improve the work processes” and “in this organization, someone always makes sure that I stop to reflect on the organization’s work process”. The Cronbach’s alpha for the individual learning behavior measure reported 0.781.

#### 4.3.4 Uncertainty Avoidance

The CV-SCALE (Yoo, Donthu, & Lenartowicz, 2011) has previously been used successfully to measure Hofstede's (1991) five cultural dimensions at the individual level. The sample item for measuring uncertainty avoidance includes, “it is important to closely follow instructions and procedures”. Cronbach’s alpha for uncertainty avoidance measure reported 0.80.

### *4.4 Data Analysis*

The study used Smart PLS version 3.2.7 for testing of research hypotheses and conceptualized model through partial least square (PLS)-structural equation modeling (SEM) (Fornell & Larcker, 1981; Ringle et al., 2005; Zaman, 2020; Zaman et al., 2019b). PLS-SEM enable researchers to undertake their research even with smaller sample sizes (Zaman, Nadeem & Nawaz, 2020). There are no assumptions of normality and independence, while using PLS-SEM owing to the nonparametric approach (Chin & Newsted, 1999; Zaman, 2020). This is a most commonly accepted technique in social and management sciences research, moreover it has gained wider recognition by scholars for

academic research and it is considered significant for theory and prediction-oriented model testing (Hair et al., 2014; Henseler et al., 2009; Zaman et al., 2019a). The analysis is distributed into phases of assessments of measurement model and then the structural model for hypothesis testing (Hair et al., 2014; Zaman et al., 2020).

#### 4.4.1 Measurement Model Assessment

In the first step of “partial least squares-structural equation modeling” technique it is suggested to assess the measurement model (Ringle et al., 2005; Zaman et al., 2020). Similarly, in the present study, it ensured the validity and reliability of the measurement model. The convergent validity, discriminant validity and reliability of the constructs have been undertaken as a pre-requisite of the measurement model assessment process (Gefen and Straub, 2005; Zaman et al., 2020).

#### 4.4.2 Convergent Validity

Convergent validity specifies the level to which the items of the constructs that are related, as in the theory they are also correlated in reality. The convergent validity assesses whether the items of a construct are highly correlated, as cross loadings of the respective variables are observed (Hair et al., 2014; Zaman et al., 2020). Therefore, a pre-requisite for examining the measurement model is to assess the cross loading and factor loadings of all the items. The indicators for analyzing the convergent validity of constructs are item loadings, average variance extracted (AVE), and composite reliability (CR).

**Table 2: Reliability and Convergent Validity**

<b>Constructs &amp; Items</b>	<b>Loadings</b>	<b><math>\alpha</math></b>	<b>CR</b>
<i>Individual learning behavior</i>			
LB1	.793	0.781	0.859
LB2	.804		
LB3	.765		
LB4	.744		
<i>Psychological safety</i>			
PS1	.792	0.786	0.862
PS2	.842		
PS3	.782		
PS4	.700		
<i>Transformational leadership</i>			
TL1	.739	0.796	0.867
TL2	.830		
TL3	.781		
TL4	.798		
<i>Uncertainty avoidance</i>			
UCA1	.811	0.80	0.885
UCA2	.868		
UCA3	.864		

Fornell and Larcker (1981) argued that the cut off value for the loadings is 0.70. The table 2 indicates that the factor loadings are significant and meets the satisfactory range i.e. 0.70. There were total 39 items of the scale and 15 falls within the desired range. Moreover, the Cronbach's alpha and composite reliability of all the variables also fulfill the recommended range i.e. greater than 0.70 (Hair et al., 2014). Therefore, this statistical test indicates that the measurement scales used for the theoretical model under study depicts a high degree of confidence (Zaman et al., 2020).

#### 4.4.3. Discriminant Validity

Discriminant validity is referred to analyzing the external consistency of the model, and it examines whether the items of one particular construct are loading in the respective construct or under other variables. The table 3 indicated the discriminant validity of the

model by verifying the validity through correlation matrix analysis. The square root of average variance extracted (AVE) are displayed in “bold diagonally” those are greater than the “off-diagonal” values in the correlation matrix, hence indicating a suitable range of the discriminant validity for the model (Fornell & Larcker, 1981). The table 3 represents that the lowest value for AVE of the individual learning behavior (0.603) was considerably higher than the highest correlation between variables (0.512), hence validating the discriminant validity.

**Table 3: Discriminant Validity of Constructs**

<b>Variables</b>	<b>AVE</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
LB	0.603	0.777			
PS	0.610	0.512	0.781		
TL	0.621	0.491	0.477	0.788	
UCA	0.719	0.326	0.393	0.309	0.838

#### 4.5 Structural Model Assessment

The second phase of the PLS-SEM technique constitutes structural modeling for testing the hypothesis (Hair et al., 2014). The path coefficients represent the strengths of relationships, whereas  $R^2$  indicates the degree of variance predicted by independent variables, and t- values are computed through bootstrapping for assessing the significance of the model. Figure 2 demonstrates the results of the hypothesized structural model of the present study. The table 4 exhibits the results for the structural model.  $H_1$  postulated that transformational leadership has a positive relationship with individual learning behavior. The  $R^2$  exhibit that 34% variation ( $R^2=0.341$   $p<0.001$ ) is predicted in individual learning behavior. The path co-efficient ( $\beta=0.320$   $t=5.635$ ) specifies a positively significant relationship between transformational leadership and individual learning behavior, showing empirical support for acceptance of the first hypothesis. The findings for the first hypothesis are in line with the prior research that support the significantly positive effect of transformational leadership on individual learning behavior (Argyris & Schön, 1978; Cook & Yanow, 1993; Kolb, 2001; Senge, 2006; Berson & Avolio, 2004; Wong et al., 2010; Bono & Anderson 2005; Loon et al., 2012; Khan et al., 2017).

**Table 4: Direct Hypothesis Testing**

Variables/ Hypothesized paths	Path coefficient	R-square	t-values
TL -> PS	0.477**	0.228	11.151
PS -> LB	0.360**	0.341	7.045
TL -> LB	0.320**		5.635

\*\*P&lt;0.001

H<sub>2</sub> proposed that transformational leadership has a positive relationship with psychological safety. The results indicate that 22% change ( $R^2=0.228$ ,  $p<0.001$ ) is predicted by transformational leadership in psychological safety. The path co-efficient ( $\beta=0.477$ ,  $t=11.151$ ,  $p<0.01$ ) indicates a positive and significant impact on psychological safety, therefore, creating support for acceptance of the second hypothesis. The findings are consistent with the previous studies that support the significantly positive effect of psychological safety (Kahn, 1990; Edmondson, 1999; Detert & Burris, 2007; Walumbwa & Schaubroeck, 2009; Halbesleben & Rathert, 2008; May et al., 2004; Isaksen & Akkermans, 2011; Tynan, 2005; Wanless, 2016; Carmeli et al., 2014). The path co-efficient ( $\beta=0.477$ ,  $t=11.151$ ,  $p<0.01$ ) in the current research is very much closer to the meta-analysis conducted by Frazier et al. (2017) in USA ( $\beta= 0.42$ ). Yet, indicating the significance of the leadership beyond the geographic boundaries remains the same. Moreover, H<sub>3</sub> postulated that psychological safety has a positive relationship with individual learning behavior. The  $R^2$  indicates 34 % variation ( $R^2=0.341$ ,  $p<0.001$ ) in learning behavior. The path co-efficient ( $\beta=0.360$ ,  $t= 7.045$ ,  $p<0.01$ ) suggests positive and significant relationship between psychological safety and individual learning behavior, making empirical support for acceptance of our third hypothesis. The findings do not support the research conclusion drawn by Choo et al. (2007) that suggests that psychological safety has no impact on learning behavior of employees. However, the present study findings are consistent with the broad understanding offered by prior research (Schein & Bennis, 1965; Edmondson, 1999; Edmondson & Lei, 2014; Sanner & Bunderson, 2015; Kumako & Asumeng, 2013). Moreover, a recent research by Frazier et al. (2017) specify that learning behavior shows greater effects in high uncertainty avoidance cultures ( $\beta = 0.77$  in contrast to low UA cultures ( $\beta = 0.60$ ), however, the strength of relationship ( $\beta=0.360$ ,  $t= 7.045$ ,  $p<0.01$ ) is moderate in Pakistan's telecom sector.

#### 4.6 Mediation Analysis

Structural model has been applied in PLS to investigate the mediating effect of psychological safety between transformational leadership and individual learning behavior. Bootstrapping was calculated to examine the significance of the model. The table 5 demonstrates the mediation analysis as specified in the form of total effect, direct effect and indirect effect (Hair et al., 2014).

**Table 5: Mediation Analysis**

Hypothesized Path	Path Coefficient	t-values	p-values
Direct effect	0.320	5.636	0.000
Indirect effect	0.172	5.675	0.000
Total effect	0.492	10.440	0.000
VAF = Indirect effect / Total effect			0.350

H<sub>4</sub> postulated that psychological safety mediates the relationship between transformational leadership and individual learning behavior. The total effect indicates ( $\beta = .492$ ,  $t=10.440$ ,  $p<0.001$ ) a positive and significant relationship. Transformational leadership has a significant direct positive impact on individual learning behavior ( $\beta =0.320$ ,  $t=5.636$ ,  $p<0.001$ ). The results specify that the positive indirect effect is also significant ( $\beta =.172$ ,  $t=5.675$ ,  $p<0.001$ ). The mediation has been analyzed by calculating variance accounted for (VAF= 35% > 20%) illustrating a partial mediation (Hair et al., 2014; 2012). Therefore, the above results provide strong empirical support for the acceptance of the fourth hypothesis, showing that psychological safety mediates the relationship between transformational leadership and individual learning. Hence, the current research study took a step forward in analyzing the mechanism between relationship transformational leadership and individual learning behavior. Mostly the previous research work examined group level psychological safety climate as mechanisms. The study finding shows that psychological safety acts as a partial rather than full mediator, which identifies that other processes also may illuminate the relationship between transformational leadership and individual learning behavior. The results show support for the hypotheses in line with the prior findings (Carmeli, Brueller, & Dutton, 2009; Carmeli & Gittell, 2009; Wong, Tjosvold, & Lu, 2010, Sarin and McDermott, 2003; Edmondson, 2003; Nembhard & Edmondson, 2006).

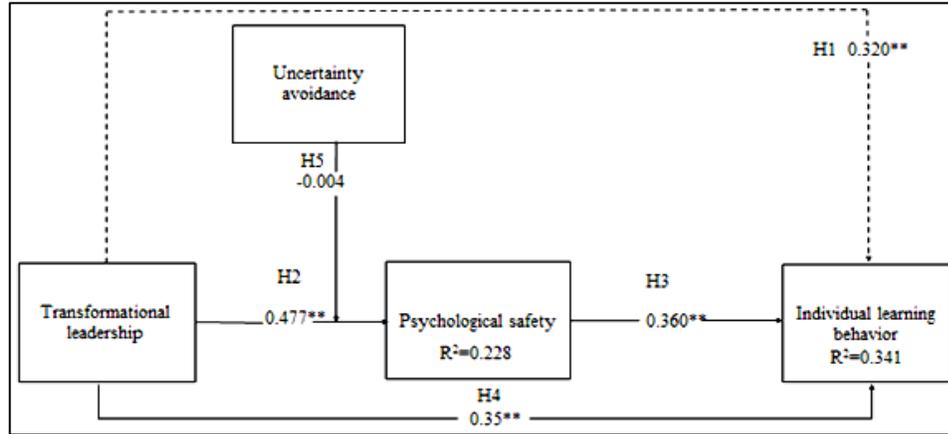
#### 4.7 Moderation Analysis

Structural model has been applied in PLS for calculating the moderation effect on psychological safety. Bootstrapping was calculated to examine the significance of the model. Moderation analysis is exhibited in the table 6 for testing  $H_5$  proposing that uncertainty avoidance moderates the relationship between transformational leadership and psychological safety, such that when uncertainty avoidance is high the relationship between transformational leadership and psychological safety becomes weaker and vice versa. The PLS-SEM results shown in table 6 indicate that the uncertainty avoidance has a positive and significant effect on psychological safety ( $\beta = 0.271$ ,  $p < 0.001$ ,  $t = 5.330$ ). But, the assumption for moderation to be significant is to examine the interaction effect of moderating and independent variable on the dependent variable (Lowry & Gaskin, 2014; Leech et al., 2008; Hair et al., 2014).

**Table 6: Moderation Analysis**

Hypothesized Path	Path coefficient	t-values	p-values
UCA-> PS	0.271	5.330	0.000
TL*UCA -> PS	-0.004	0.100	0.920

The interaction of transformational leadership and uncertainty avoidance indicates the moderating effect on psychological safety. The PLS-SEM results indicate that the moderating effect (TL\*UCA) on psychological safety is negative, however, it does not significantly impact the relationship between transformational and psychological safety ( $\beta = -0.004$ ,  $p > 0.05$ ,  $t > 1.64$ ), hence showing insignificant evidence to empirically support our final (i.e. fifth) hypothesis. The findings are inconsistent with the previous literature, as the fifth hypothesized moderating role of uncertainty avoidance in the relationship of transformational leadership and psychological safety has not been supported (Friedman, Chi, & Liu, 2006; Liu, Zhu, & Yang, 2010; Hofstede, 2001). The results demonstrate that at the individual level psychological safety almost 73% (24 out of 33) were not significant in their meta-analytical review (Frazier et al., 2017). However, the present theoretical model findings assessed by structural model (PLS-SEM) do not show support for significance of high uncertainty avoidance as a buffer in the context of Pakistan; an important aspect in this regard could be occupational or professional settings and the telecom sector of Pakistan is characterized as one of the most advanced and highly competitive industries may influence employee perceptions of uncertainty avoidance and



**Figure 2: Structural Model**

its effect on psychological safety (Nembhard & Edmondson, 2006; Wimbush & Shepard, 1994). Furthermore, the insignificant role of uncertainty avoidance between psychological safety and transformational leadership may be attributed to the strong and effective leadership support for the employees of the telecom sector, thus leading to abate the cultural and social norms (Tipu, Ryan, & Fantasy, 2012).

### 5. Discussion

The study purpose was to investigate the mediating role of psychological safety between transformational leadership and individual learning behavior (Kim et al., 2019; Schweder, 2020; Sherf et al., 2020). Moreover, it examined the role of uncertainty avoidance as a moderator between the transformational leadership and psychological safety (Afsar & Masood, 2018; Kim et al., 2019; Lawrie et al., 2020; Zeng et al., 2020) in the telecom sector of Islamabad, Pakistan. Moreover, relying on the tents of social learning theory (Bandura & Walters, 1977) the researcher examined the underlying phenomenon for the current theortecial model. The current research was conducted in the telecom industry targeting employees with the help of convenience sampling to carry an empirical research. The research postulated five hypotheses out of which first three were indicating direct relations, and the other two proposed mediating and moderating relations. The forth hypotheses proposed the mediating role of psychological safety and the last hypotheses investigated moderating role of high uncertainty avoidance between

transformational leadership and psychological safety, as it tends to weaken the relation. PLS-SEM provided the empirical findings on the hypothesized relationships, using self-administered survey of telecom-sector employees.

### *5.1 Theoretical Implications*

The present research has initiated the disentanglement of the complex relationship between transformational leadership and psychological safety while exploring the buffering role of uncertainty avoidance (Kim et al., 2019; Sherf et al., 2020; Watts et al., 2020). A significant contribution of this study is extension of literature on social learning theory (Bandura & Walters, 1977) through emphasizing the impact of psychological safety as a mediating mechanism (Sherf et al., 2020). The research is integrating transformational leadership and learning streams of research by illustrating the causal attributions. Moreover, plethora of research in this domain examines other organizational and individual outcomes i.e. work engagement, organizational commitment and job satisfaction, but there has been limited literature on learning behavior (Pacheco et al., 2015). Another important contribution of the present theoretical framework is analyzing the role of high uncertainty avoidance on psychological safety for illuminating its impact in the context of non-western countries, as the existing literature on the notion of psychological safety is weak and in early stages of development in developing countries (Zeng et al., 2020). The present study is the first to conceptualize the moderating role of uncertainty avoidance in Pakistan (Frazier et al., 2017; Steele & Hartog, 2020). Hence, the current findings do not show congruence of the phenomenon of high uncertainty avoidance leading to influence the psychological safety in the context of Pakistan, yet the co-efficient value indicate that the negative moderating effect of uncertainty avoidance on psychological safety exist (Lawrie et al., 2020; Sherf et al., 2020) and influence the construct marginally, but the relationship is non-significant.

### *5.2 Practical Implications*

As economic disruptions continue to grapple the telecom sector, the fast-paced telecom competition is attracting high waves of challenges as well a tremendous opportunity. Hence, the present research has significant implications for practice in terms of the benefits of transformational leadership for stimulating individual learning behavior in the telecom-oriented companies (Kim et al., 2019; Yadin & Or-Bach, 2019; Zaman, 2020). First, the findings illustrate that the transformational leadership strategies have the potential to instill the required contextual or situational cues for telecom employee's wellbeing and facilitates in promoting a psychologically safe environment (Detert & Burris, 2007; Morrison, 2014). Second, in order to create a psychologically safe climate,

the key factors that a telecom company should take into consideration are critical reviews, open communication, reflection, constructive suggestions and feedback. Such characteristics are mainly crucial for organizational and individual learning in the telecom sector (Carmeli et al., 2014; Schweder, 2020; Yadin & Or-Bach, 2019).

Third, the telecom sector needs to efficiently navigate the rapidly changing needs of the telecom customers. Hence, the transformational leadership is critical to encourage knowledge sharing and learning behavior through a process of collective vision. This implies that telecom companies should recruit and train leaders having transformational leadership style as they engage in developing their follower's potential to meet customers changing demands. Wang and Leung (2011) highlight that employees produce positive outcomes i.e. voice and learning behavior by creating a psychologically safe environment, as the employees expect supporting mechanisms in the context of having less tolerance for ambiguity and uncertainty (Sherf et al., 2020; Watts et al., 2020). The current research suggests that the emphasis on psychological safety is not referring to conformity and keeping the telecom employees in comfort zone, rather encouragement for critical thinking and experiential learning. Forth, the research findings suggest that the human resource and recruitment department in the telecom companies should aim at capturing individuals with transformational traits by designing appropriate interview and selection tests (Kim et al., 2019; Zaman et al., 2019b).

### *5.3 Future Implications*

The researcher has the following implications for the future researchers. A part from the transformational leadership style it is recommended for future research to explore the impact of inclusive leadership style in relation to psychological safety (Liu et al., 2010; Sherf et al., 2020; Zaman, 2020; Zaman et al., 2019b). Another potential avenue for future research is to explore the dark side of psychological safety and its counter-productive effects on workplace (Sherf et al., 2020; Zeng et al., 2020). In line with the theoretical support of “too much of a goof thing effect (TMGT effect)” (Whetzel et al., 2010). The curvilinear relationship of psychological safety is an emerging topic in this domain. A potential outcome in regard could be “unethical behavior”, and it is suggested to conduct an empirical research on the (TGMT effect) theoretical phenomenon (Pearsall & Ellis, 2011).

Future research is recommended to investigate the moderating role of uncertainty avoidance (Lawrie et al., 2020; Wang, 2018) in other contextual settings and industries such as IT, health care and banking, and a cross-cultural comparison is also suggested to

evaluate the effect of uncertainty avoidance in diverse geographic settings (Watts et al., 2020). Future research should implement longitudinal design to support the causal relationships inferred in the research (Zaman, 2020). Future research is suggested to take into consideration the role of personality traits i.e. openness or learning orientation in examining the effect on psychological safety (Lepine et al., 2011; Sherf et al., 2020; Zeng et al., 2020).

### *5.4 Limitations*

The study has a number of limitations. The data may be subjected to single source and mono- method bias. To reduce the common method variance, the researcher adopted a method defined by Podsakoff et al. (2003) while using reliable and valid constructs and performed exploratory factor analyses. Moreover, mono method variance is difficult to avoid while assessing attitudinal dimensions. Regardless of the complexity in avoiding the issue of same source bias, it may be responsible for overrating the responses in this study. Secondly, the current study has a cross sectional research design, and the nature of such data limits the scope to test the causal relationships, however future research may consider carrying a longitudinal study (Zaman, 2020). Finally, the sample size was comparatively smaller and the research has a limited focus. Therefore, future research may replicate the findings in other industries targeting a larger sample size (Zaman et al., 2019a).

### **6. Conclusion**

As the telecom sector continues to generate billions of revenues to fuel Pakistan's economy and attracting foreign and domestic investments, the future growth potential of this sector must be prudently managed. Transformational leadership, psychological safety and individual learning behavior of telecom employees are critical to sustainable telecom growth (Afsar & Masood, 2018; Schweder, 2020; Sherf et al., 2020; Yadin & Or-Bach, 2019). Hence, this research advances the understanding of the underlying mechanism, while considering the moderating role of uncertainty avoidance in the telecom sector in Pakistan. As the telecom sector operates in a culture with high uncertainty avoidance experienced in Pakistan that tends to weaken the effect of transformational leadership on psychological safety. However, the findings of this research do not show significant support for this Hofstede's culture dimension i.e. high uncertainty avoidance. Hence, the research calls for further exploration on the role of uncertainty avoidance in the telecom sector in Pakistan that is characterized as intensively competitive and highly volatile. The present study strengthens the boundary conditions and underlying mechanisms to suggest novel guidelines to better understand the emerging phenomenon of psychological safety in Pakistan's telecom sector (Zeng et al., 2020).

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