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# Relationship among leadership styles, employee's well-being and employee's safety behavior: an empirical evidence of COVID-19 from the frontline healthcare workers

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## ABSTRACT

The study investigates the association among leadership styles, employee well-being and employee's safety behavior of healthcare workers. The study used social learning theory (SLT) for examining the relationship between leadership styles and employee safety behavior. Moreover, social exchange theory (SET) has been incorporated to narrate the moderating effect of employee well-being on the relationship between leadership styles and employee safety behavior. Data have been collected with the help of questionnaires from 515 healthcare workers working in the public hospitals of Punjab, Pakistan. Structural equation modeling has been utilized to test the study hypothesis. Findings indicate that both transactional and transformational leaderships have significant and positive relationship with employee safety behavior. Interestingly, employee well-being negatively moderates the relationship between transformational leadership and employee safety behavior. Furthermore, no moderation was found on the relationship between transactional leadership and employee safety behavior. The findings propose that healthcare management should invest to aware employees regarding their well-being. The findings also suggest that leaders should influence their followers to adopt safety measures at workplace. Furthermore, leaders must be role models in order to attain a competitive advantage and make a balance between management and workers.

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## SUBJECT

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## 1. Introduction

Fatalities and non-fatalities that happen in numerous organizations have long-term results which can be faced by people, government, entities and as well as working personnel's within the organizations. It is the fundamental responsibility of the government, owners and regulatory authorities to take care of the health of working staff and provide them safe workplace. There are numbers of diseases due to which humans suffer illness and sometimes it results to death like cancer, coronary artery, tuberculosis and diabetes. COVID-19 is now one of them. According to Alhazzani et al. (2020) novel corona virus termed as severe acute respiratory syndrome coronavirus or COVID-19 (SARS-CoV-2) spread in Wuhan, China at the end of 2019. World Health Organization (WHO), named this disease as Coronavirus (COVID-19) (Alhazzani et al., 2020).

WHO, stated that in January 2020, 282 cases were appeared in China, Thailand, Japan and Korea. Among these countries China was at the top of list with 278 confirmed cases following by Thailand (2), Japan (1) and Korea (1). According to WHO, Situation Report-209 more than 20 million individuals were infected with COVID-19 with 767764 deaths across the globe. Medical personnel including doctors, nurses and paramedics are at the high risk of infecting COVID-19 (Cheung et al., 2020). More than 90000 healthcare workers were infected from COVID-19 and approximately 260 nurses have been declared dead across the globe (Kenny, 2020). The situation of the healthcare workers relating to COVID-19 in numerous countries including, Germany, Spain, Turkey, Cameroon, United States, Italy, Philippines and Ecuador is not satisfactory as there were many healthcare workers infected with this virus (New Straits Times, 2020).

The condition relating to workplace injuries and deaths in developing countries like Pakistan is worst. More than 90% injuries resulting to death take place in developing countries (Yadav, 2019). The Government is failed to provide sufficient personal protective equipment's (PPEs) to medical professionals (Junaidi, 2020). There are 160118 confirmed cases of COVID-19 in Pakistan and approximately 3093 lost their lives (Government of Pakistan, 2020). According to Junaidi (2020) the government should provide rationally PPEs (e.g. N-95 masks, medical gloves) to the doctors, nurses and other medical staff who need them but unfortunately the government is not understanding that each and every healthcare professional need PPEs and their lives are at risk. There were more than 440 medical workers were infected from the COVID-19 and 8 have been lost their lives (Butt, 2020). 38 healthcare professional were tested positive for COVID-19 in Nishtar Hospital Multan, similarly, 8 paramedics and 6 doctors were tested positive for COVID-19 in Shaheed Benazir Bhutto Trauma Centre and Civil Hospital, Karachi. Moreover, agynecologist was tested positive for COVID-19 in Lahore (Junaidi, 2020). Unfortunately, one frontline doctor has been declared dead due to COVID-19 (Taj, 2020). Butt (2020), argued that the issue behind this rise is the lack of PPEs to the healthcare staff and the government policies.

There is huge amount of cost involved in the workplace injuries and fatalities and for this reason many countries and entities started taking interest in this problem (Rikhardsson & Impgaard, 2004). Economic and workforce loss occur because of workplace injuries and accidents. Organizations suffer from direct costs which include death claims, medical fee, legal fee, expenses for safety and health and appliances damage. Similarly, indirect cost are also occurred which sometimes remarkably

higher, because indirect costs includes disturbance in quality and productivity, employee's replacement costs, insurance costs and training costs (Buckle & Devereux, 2002; Leigh, 2011). While, both direct and indirect costs are involved, quick action must be taken to stop the occurrence of healthcare injuries and accidents. The actions may be scientific and systematic type to examine that what are the factors that contributes in occupational injuries and accidents so that effective practices and measures can be implemented.

Un-safe safety behavior of the employees are the prime cause of workplace injuries and deaths (Allahyari et al., 2014; Love et al., 2018; Sun et al., 2018). In addition, behavioral in-appropriate responses and in-appropriate activities leads to workplace accidents (Dhanabal et al., 2016). Although, effective safety behavior leads to organizational elements that have an impact on reducing workplace accidents (Zhang et al., 2015). Safety behavior refers to employee's actions with respect to his personal safety, for an instance, to follow the protocols of the workplace and wearing PPEs (Garavan & O'Brien, 2001). The present study measured safety behavior with safety compliance. Safety compliance refers to main activities followed by the workers to make workplace safe (e.g. wearing PPEs) (Griffin & Neal, 2000). The reason behind measuring safety behavior with safety compliance is that it gained a lot of recognition in behavioral safety research (Seo et al., 2015). More than 80-85% accidents were caused due to human errors and it is directly related to non-compliance behavior of the individuals (Gordon et al., 1996; Reason, 1995). Safety compliance behavior prevents the co-workers to take any un-necessary risks which put their lives in danger. In addition, safety compliance behavior has a critical role in reduction of workplace causalities with regards to organizational technicalities. Similarly, it is a behavioral approach that meet the designed safety standards of the workplace. Moreover, it is an element of a task performance as the core activities which are needed by the workers to maintain workplace safety (Inness et al., 2010).

The medical personnel are getting infected to COVID-19 due to the fact that there is lack of leadership due to which there is irrational distribution of PPEs which create panic. Therefore, the increasing numbers of positive COVID-19 among healthcare professional stipulates the frightening situation in the country and it is mandatory to find out the solution for this problem to enhance safety behavior of the medical staff. We suggest that effective and passionate leadership is needed which urge the medical personnel to behave safely.

Both transactional and transformational leaderships are incorporated as independent variables in the current study to enhance safety behavior of the medical staff. Transactional leadership is described as the daily transactional routine among leaders and followers (Pater, 2004). In addition, transactional leadership are linked with employee's behavior which are associated with rewarding and monitoring (Reid et al., 2008). Whereas, transformational leadership is explained as when two people engage is such a way that they raise each other morality and motivation (Burns, 1978; Adamshick, 2007). Similarly, it is 'a process that facilitates major changes in attitudes and assumptions of organizational members and builds commitment for the organization's mission and objectives' (Yukl, 1998).

The study applies leadership styles to enhance the safety behavior of the medical staff. It is believed that there is link between safety collapse and style of leadership

(Adler et al., 2014; Flin & Yule, 2004). Human errors are managed and controlled by a better leadership (Hawkins, 2017; Donahue et al., 2011; Ginnett, 2017). In addition, leadership have an impact on safety behavior and it results help individuals to behave safely (Smith et al., 2016; Kapp, 2012).

In spite of the fact that, there are inconsistencies in the previous literature with respect to leadership styles and safety behavior (Lu & Yang, 2010; Lu et al., 2016). Safety researchers are not agree on one point as the arguments and views are different from each other relating to the current relationship (Smith et al., 2016; Kapp, 2012). Therefore, the current study introduce a moderator on the relationship between leadership styles and safety behavior. Incorporating moderating effect is important in the current model as the previous literature exhibits mix findings. Baron and Kenny (1986) argued that the moderating effect between independent and dependent variable can explored the relationship in different ways. As it provide further information among exogenous and endogenous constructs (Hefner, 2017). The present study introduced employee well-being as a moderator on the relationship between leadership styles and safety behavior. Up to the researcher' knowledge there is not a single study which examined the same relationship.

Employee well-being is considered as a prominent phenomenon in the organizational research (Mirabito & Berry, 2015; Sharma et al., 2016; Su & Swanson, 2019; Ahmed et al., 2020). It is very important for the organizations to provide happy and healthy workplace for the workers. Past literature indicated that employee well-being is an important factor for the organization's success as it effects the attitude and behavior of the employees (Ahmed et al., 2020; Sharma et al., 2016). Employee well-being is a significant indicator and employees which have greater well-being are more productive which is beneficial for the organization as the employees show safe behavior at workplace. The relationship of leadership, employee well-being and safety behavior in healthcare industry is lacking. The leadership is mandatory for the subordinates as the leaders are role model for the workers and employee well-being is attributed to the various outcomes that can positively influence the safety attitudes and behaviors of the employees. Therefore, the understanding of leadership styles, well-being and safety behavior is significant for healthcare industry.

Numerous studies have investigated leadership styles and safety behavior (Soenderstrup-Andersen et al., 2011; Lu & Yang, 2010; Wu et al., 2007; Yukl, 2006) in different countries but limited attention is given to the Pakistani context where safety is a major issue in different industries especially in healthcare. Although, safety behavior needs more examination in Pakistan as the previous results cannot be applicable due demographical and cultural difference. Therefore, the present study fulfill the gap in theory and literature by examining the association between leadership styles and safety behavior by applying employee well-being as a moderator in Pakistani context.

## **2. Literature review**

### **2.1. Social learning theory**

Social Learning Theory (SLT) (Bandura, 1977) suggested as a significant theory in the area of leadership and behavioral studies (Brown et al., 2005; Lu & Lin, 2014). SLT

states that leaders work as a role model and it put impact on the behavior of the working employees. Similarly, with experience, encouragement, modeling, attachments and emotions may affect employees (Bandura, 1977). Therefore, the employees can be affected by the leadership as their role model in a behavioral aspect (Detert & Treviño, 2010). Moreover, individuals behave appropriately by watching other's behavior and for the appropriate behavior individuals follow the behavior of their role models (Bandura, 1977). Detert and Treviño (2010) argued that employees are influenced by the modeling process of their leaders. For instance, by observing their leaders employees demonstrate that how they continue their jobs and play a significant role at workplace. For the purpose of the present study SLT will be incorporated to measure the relationship between leadership styles and employee safety behavior. The study will give direction to the healthcare industry literature on the relationship between leadership styles and employee safety behavior. However, with the help of this model we came to understand that how leadership styles influence employee safety behavior by encouraging them to take part in safety activities. As stated above leaders are role models thus in the context of SLT if the leaders encourage their subordinates to behave safely than they would follow them and as a result they will create an accidents free work environment. As we know that transactional leadership are based on daily transactions and transformation leadership is more on ethically support system. By applying these leadership styles would provide an appropriate safety behavior in the setting of SLT.

## **2.2. Social exchange theory**

Another theory incorporated in this study is Social Exchange Theory (SET) which describes the interaction effect of well-being on the relation between leadership styles and employee's safety behavior. The theory is discovered by Blau (1964) and it is an important theory to address employee's behavior (Ahmed et al., 2020). The theory focuses on the human behavior that how human behavior are influenced by cost and reward. Cropanzano and Mitchell (2005) argued that social exchange transmission mechanism includes: leader-member exchange, trust, top level management support, supervisor support and organizational support. According to this theory an individual reciprocate a specified behavior in form of positive or negative result. Similarly, when employees feel that management (leaders) support them they are likely to reciprocate in form of proactive behavior or safety behavior. Sharma et al. (2016) indicated that employee well-being influence the behavior of employees. Therefore, SET assumption is applicable that how happy and healthy employees influence employee's safety behavior. For this purpose we propose moderating effect of employee well-being on the relationship between leadership style and employee's safety behavior. We posit that if the employees are healthy and efficient at workplace than there is likely to have a better safety behavior expectations from them. In other words, SET is based on reciprocal association, therefore, in the context of SET if employees are receiving a healthy work environment where they are healthy and sound than in return they reciprocate in an effective and better safety behavior. Thus, in the light of SET it is believed that employee well-being would moderate this relationship in a better way.

### **2.3. Safety behavior**

Safety behavior is a key factor for an organization to maintain and protect their workers which are working in the organization (McDonald et al., 2000). Chang and Yeh (2005) argued that safety behavior is the number of fatal and non-fatal accidents that happen in an organization. Previous studies conclude that safety behavior is associated to the safety related outcomes (Fabiano et al., 2004; Oliver et al., 2002). Safety behavior is among one of the procedure that are followed by the organization to provide safe work environment. The present study measured safety behavior by safety compliance. Safety compliance is the workplace set rules and regulations. According to Neal & Griffin,(2002) safety compliance refers to maintain the working standard by wearing personal protective equipment. Therefore, it is necessary for the organizations to take the initiatives relating to safety compliance in order to avoid workplace injuries. The present study is an effort in this regard.

### **2.4. Leadership styles**

Leadership refers to individuals' ability to effect the behavior of other individuals in order to achieve the goals of the organizations (Judge et al., 2002). Similarly, leadership is process of leading a group of people to achieve the specified tasks (Bernhard & Walsh, 1995). Moreover, it explain the person's capability to motivate, influence and empower others to attain the organizational success (Fikret Pasa et al., 2001). Previous literature indicated that leadership styles have a significant impact on employee behavior (Abbas & Yaqoob, 2009; Lu & Yang, 2010;Purvanova et al., 2006; Yukl, 2008)which is evident in the success of an organization. The present study endorsed two leadership styles, namely transactional leadership and transformational leadership, recognized widely to evaluate leadership styles (Howell & Avolio, 1993; Reid et al., 2008; Waldman et al., 1990). There are some other leadership styles (e.g. authentic leadership, spiritual leadership, authoritarian leadership) but we incorporated only two leadership styles namely; transactional leadership and transformational leadership because these leadership styles gain a lot of recognition in safety management research. Similarly, these leadership styles focuses mostly on the daily basis routine, exchange of information and motivation to achieve the routine tasks.

Transactional leadership is described as the routine transactions among leaders and subordinates (Pater, 2004). In addition, transactional leadership refers to an exchange process where leaders and followers exchange valuable information/things with each other (Burns, 1978). On the other hand transformational leadership is a type of leadership which morally and ethically support both leaders and their followers in a mutual consent (Adamshick, 2007). Similarly, transformational leadership changes the assumptions and attitude of the organizational individuals in order to construct the dedication to achieve the objectives of the organization (Yukl, 1998).

Leadership have a positive impact on employee safety behavior. Number of studies have been conducted that how leadership (Transactional & transformational) influence employee safety behavior (Clarke & Ward, 2006; Wu et al., 2008; Inness et al., 2010; Mullen & Kelloway, 2009). Therefore, we can say that leadership styles influence employee safety behavior. Hence, the following hypothesis are formulated:

**H1:** Transactional leadership is positively related to employee safety compliance

**H2:** Transformational leadership is positively related to employee safety compliance

### 2.5. Employee well-being

Employee well-being includes both physical and mental factors (Sharma et al., 2016). Employee mental factors contain fatigue, self-respect, illness, anxiety and depression although, physical factors comprises muscular pain, headache and tiredness. Employee well-being is a prominent component of an organization's victory. It is mandatory for the organizations and corporations to provide a happier and healthier workplace to employees. Prior literature have stipulated that well-being positively influence the attitudes and behaviors of employees which results the success of organizations (Sharma et al., 2016). Likewise, well-being is essential for organization's glory. Organizations in which employees have greater well-being will perform their duties in a productive manner which put a positive impact on safety behavior of employees. Adverse well-being leads to lower the production and escalate the cost of expenses (medical & insurance). Thus, the organization should be well aware of the importance of employee well-being. Leadership styles affect employee well-being (Nyberg et al., 2011). When there is a good leadership in the organization which care the workers than workers influence their safety behavior by obeying the safety protocols. Previous studies have evident that leadership styles influence employee well-being. Likewise, past literature suggested that employee well-being leads to positive attitude and behavior (Chiu et al., 2013; Woo et al., 2015). Organizations which care employee's well-being both psychologically and financially are successful and profitable because employees feel that they are being valued and recognized. Similarly, employee believe that they have a secure future with mutual positive exchange between employer and employee (Kossek et al., 2012). Performance of the organization and employee well-being are part of a dual agenda where workers' and employers' interests are considered as complementary. In this way worker are viewed as an asset rather than just an expense to be kept to a minimum. Nyberg et al. (2011) argued that while investigating leadership styles employee well-being can be examine with the help of mediation and moderation effects. Hence, the present study believe that employee well-being moderate the association between leadership styles and employee safety behavior. On the basis of these arguments the current study come up with the hypothesis as:

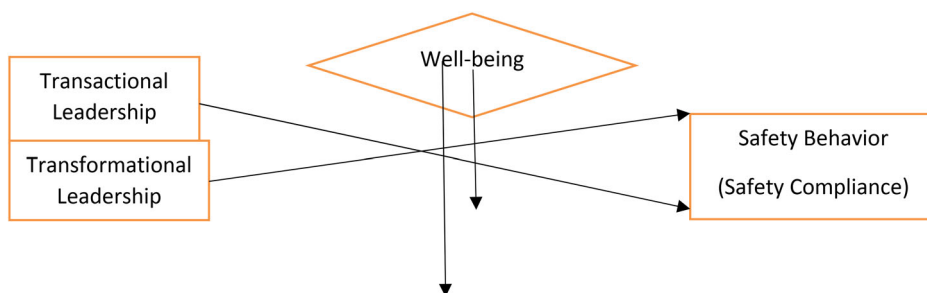
**H3:** Employee well-being moderates the relationship between transactional leadership and safety compliance

**H4:** Employee well-being moderate the relationship between transformational leadership and safety compliance

### 3. Research model

Figure 1 shows the conceptual model of the present study. The independent variables of the present study are transactional leadership and transformational leadership.





**Figure 1.** Conceptual model.  
Source: Author's own computation.

Whereas, employee well-being is a moderating and safety behavior (safety compliance) is a dependent variable.

#### 4. Data collection

The target respondents of this study includes the healthcare workers which are working in the public hospitals of Punjab, Pakistan. G power software was used to calculate the sample size. The province Punjab is selected for the data collection because it is the second most populous province and it is known for the best quality hospitals. For collecting data a permission was taken from the head of every hospital. The purpose of the study was explained to them that it will be strictly used for the educational purpose and your responses will be kept confidential. Before conducting the formal data collection a pilot study was conducted. After collecting the questionnaires the Cronbach's alpha was obtained to check the reliability of data. The Cronbach's alpha of every construct were in acceptable range. Therefore, the questionnaire were distributed for genuine study. Data were collected from the employees of twenty hospitals with the help of convenience sampling. It is a type of non-probability sampling technique where data is taken from the people easy to approach. The study adopted convenience sampling technique because the data was collected in lockdown when maintaining social distance is compulsory so data was gathered from the respondents who are easily to approach and who are willing to participate. A total of 530 respondents participated in the study. Out of 530 questionnaires 15 were incomplete so remaining 515 were used for data analysis. Data was analyzed using PLS SEM. Data for the present study has been collected through self-administered questionnaire with 5 point Likert scale ranging from (1) strongly disagree to (5) strongly agree. Seven items were adopted from the study of Vinodkumar and Bhasi (2010) for safety compliance. Similarly, eleven items for leadership styles (5) transactional & (6) transformational) were taken from the study of Ismail et al. (2010). Lastly, three items for well-being were adopted from the study of Su and Swanson (2019).

#### 5. Demographics

The demographics of the present study are shown in the Table 1. It includes gender, age, job title, marital status and working experience. As far as gender is concerned it can be seen from demographic features that 75.7% of the respondents were male and

**Table 1.** Respondents profile.

Items	Frequency	Percentage
Gender		
Male	390	75.7
Female	125	24.3
Age		
Under 25 years	61	11.8
25 to 35 years	355	68.9
36 to 45 years	56	10.9
46 to 55 years	22	4.3
Above 55 years	21	4.1
Job title		
Doctors	88	17.1
Nurses	314	61.0
Paramedics	113	21.9
Marital status		
Single	27	5.2
Married	459	89.1
Divorced	17	3.3
Widowed	12	2.3
Working experience		
Less than 1 year	64	12.4
1 to 5 years	296	57.5
6 to 10 years	155	30.1

Source: Author's own computation.

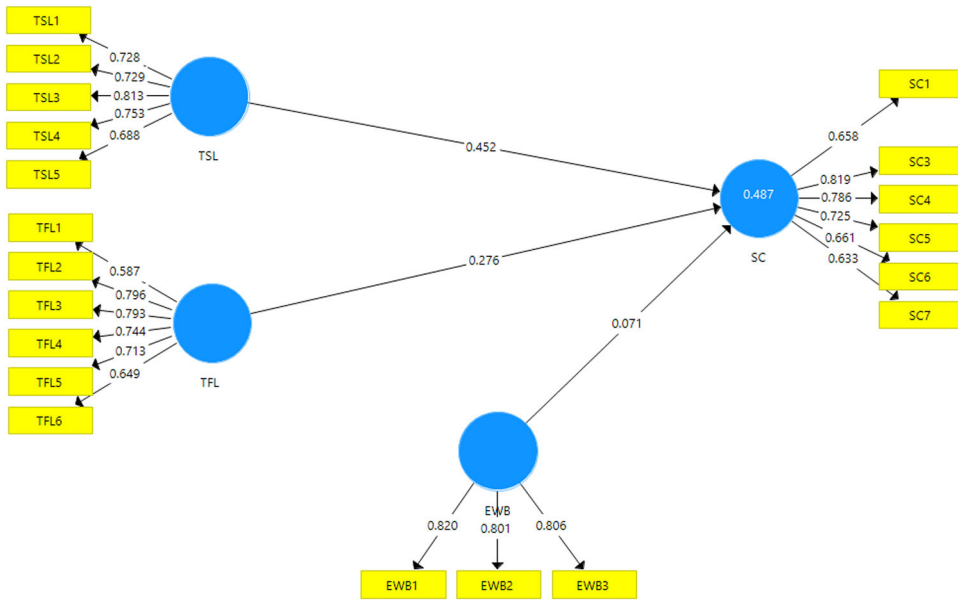
only 24.3% were female. With respect to age 11.8% of the workers were under 25 years, majority 68.9% of the workers were come under the age group of 25 to 35 years, 10.9% of the respondents belongs to 36 to 45 years, similarly, 4.3% of the respondents were involved in 46 to 55 years and only 4.1% of the respondents belong to above 55 years. In terms of job title 17.1% of the respondents were doctors, 61% of the respondents were nurses and 21.9% of the respondents were paramedics. With reference to marital status 5.2% of the respondents were single, 89.1% of the workers were married, 3.3% of the participants were divorced and 2.3% of the participants were widowed. The working experience of the participants shows that 12.4% of the participants have less than 1 year of experience, 57.5% of the participants have 1 to 5 years of experience and 30.1% of the participants have 6 to 10 years of experience.

## 6. Data analysis and results

The present study incorporated structural equation modeling (SEM) for the analysis of the data. Ringle et al. (2015) stated that it is a method utilized for measuring the validity of theory with the help of statistical data. SEM is a multivariate analysis used for measuring the relationship among latent constructs. To evaluate the conceptual model of the present study SmartPLS 3.2.6 has been used. A bootstrap comprising 5000 sub-samples was applied (Hair et al., 2011). The main analysis was divided into two parts measurement model (model validity) and structural model (hypothesis testing).

### 6.1. Measurement model

The present study investigates the measurement model that examines the relationship among latent constructs and their measurements. As suggested by Hair et al. (2011)



**Figure 2.** Measurement model.

Source: Author's own computation.

several test has been incorporate in order to measure measurement model. These test includes individual item reliability, internal consistency reliability, convergent validity and discriminant validity. The figure and sections of the measurement model are discussed below. (Figure 2)

### 6.2. Individual Item reliability

Individual item reliability depicts the factor loading of every construct (Hair et al., 2016; Hulland, 1999). Each item in the measurement model represents a unique factor loading. The minimum value of a factor is 0.30 and a construct representing a value above 0.30 can be retained (Hair et al., 2016). Similarly, Hair et al. (2016) stated that the item must be deleted if the deletion of item increase average variance extracted (AVE) and composite reliability (CR) (Awais-E-Yazdan et al., 2022). Thus, the present study removed one item (SC2) as the removal increases the value AVE and CR.

### 6.3. Internal consistency reliability

Composite reliability (CR) is an essential factor in order to evaluate internal consistency reliability. According to Hair et al. (2014) the degree to which each item evaluates the same concept is called internal consistency reliability. Generally, Cronbach's alpha and CR are used to measure internal consistency reliability but CR gain a lot of recognition (Hair et al., 2014). Similarly, the value of CR must be above than 0.70 (Hair et al., 2017; Hair et al., 2014). Therefore, the present study used CR for evaluating internal consistency reliability (refer Table 2).

**Table 2.** Loadings, composite reliability, and average variance extracted.

Constructs	Items	Loadings	AVE	CR
Transactional leadership	TSL1	0.728	0.552	0.860
	TSL2	0.729		
	TSL3	0.813		
	TSL4	0.753		
	TSL5	0.688		
Transformational leadership	TFL1	0.587	0.515	0.863
	TFL2	0.796		
	TFL3	0.793		
	TFL4	0.744		
	TFL5	0.713		
	TFL6	0.649		
Employee well-being	EWB1	0.820	0.655	0.850
	EWB2	0.801		
	EWB3	0.806		
Safety compliance	SC1	0.658	0.514	0.863
	SC3	0.819		
	SC4	0.786		
	SC5	0.725		
	SC6	0.661		
	SC7	0.633		

Source: Author's own computation.

#### 6.4. Convergent validity

For evaluating convergent validity average variance extracted (AVE) has been used in the study. To analyze accurate convergent validity the value of AVE should be above than 0.50 (Fernandes, 2012; Hair et al., 2014). Table 2 represents the acceptable values of AVE.

#### 6.5. Discriminant validity

Discriminant validity refers to a degree in which every construct is different from other construct. Fornell-Larcker's (1981) criteria is followed in order to measure discriminant validity. Similarly, cross-loadings is another criteria to evaluate discriminant validity (Grégoire & Fisher, 2006). It is suggested that the value of each construct should be greater than its cross-loadings with other constructs. Moreover, discriminant validity can also be measure with the help of heterotrait-monotrait ratio (HTMT) (Henseler et al., 2015). HTMT is a factor correlation that differentiate between two factors. All the three methods are incorporated in the present study in order to measure discriminant validity.

Table 3 displays the Fornell-Larcker criterion, Table 4 represents cross-loadings, and Table 5 depicts the HTMT of the present study.

#### 6.6. Structural model

For the purpose of path coefficient the present study followed bootstrapping process along with 5000 bootstrap samples and 515 respondents' samples to evaluate the structural model. The structural model (direct relationships and interactions effect) of the study is shown in Figure 3.

**Table 3.** Latent variable correlations and square roots of (AVE).

	EWB	SC	TFL	TSL
EWB	<b>0.809</b>			
SC	0.314	<b>0.717</b>		
TFL	0.457	0.612	<b>0.718</b>	
TSL	0.258	0.656	0.673	<b>0.743</b>

Note. Entries in the boldface represent the square root of average variance extracted (AVE).

Source: Author's own computation.

**Table 4.** Cross loadings.

	EWB	SC	TFL	TSL
EWB1	<b>0.820</b>	0.294	0.488	0.284
EWB2	<b>0.801</b>	0.179	0.328	0.176
EWB3	<b>0.806</b>	0.261	0.266	0.147
SC1	0.384	<b>0.658</b>	0.515	0.376
SC3	0.293	<b>0.819</b>	0.511	0.513
SC4	0.245	<b>0.786</b>	0.482	0.450
SC5	0.097	<b>0.725</b>	0.389	0.545
SC6	0.128	<b>0.661</b>	0.337	0.410
SC7	0.186	<b>0.633</b>	0.378	0.510
TFL1	0.227	0.430	<b>0.587</b>	0.561
TFL2	0.287	0.549	<b>0.796</b>	0.639
TFL3	0.296	0.428	<b>0.793</b>	0.642
TFL4	0.415	0.440	<b>0.744</b>	0.380
TFL5	0.406	0.421	<b>0.713</b>	0.327
TFL6	0.366	0.317	<b>0.649</b>	0.256
TSL1	0.170	0.491	0.394	<b>0.728</b>
TSL2	0.203	0.497	0.418	<b>0.729</b>
TSL3	0.232	0.565	0.664	<b>0.813</b>
TSL4	0.149	0.426	0.534	<b>0.753</b>
TSL5	0.195	0.440	0.476	<b>0.688</b>

Note: The bold values are representing the values which greater than its cross-loadings with other constructs.

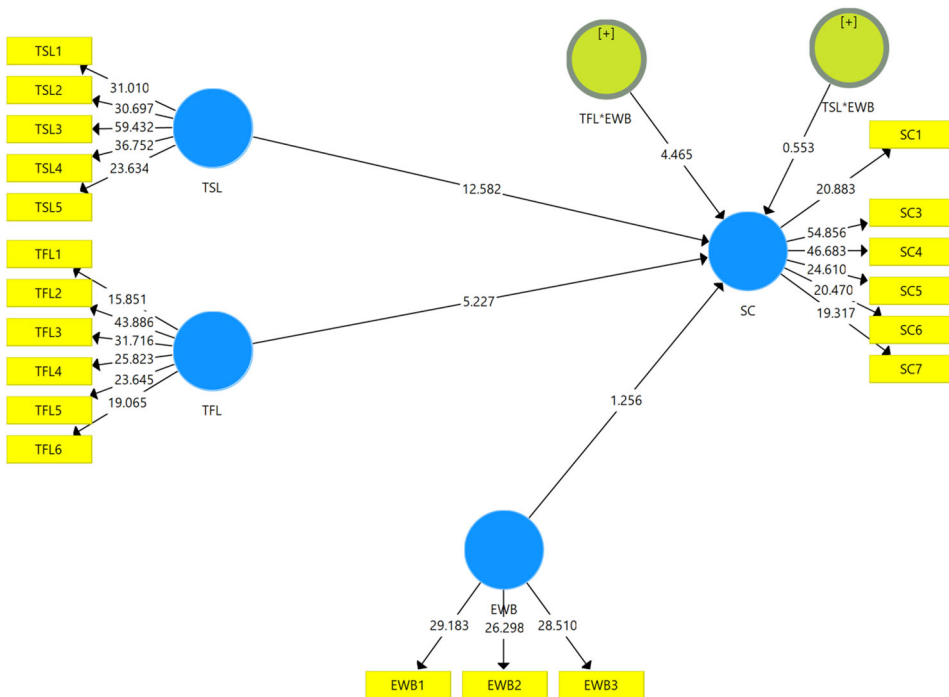
Source: Author's own computation.

**Table 5.** HTMT correlation matrix for discriminant validity.

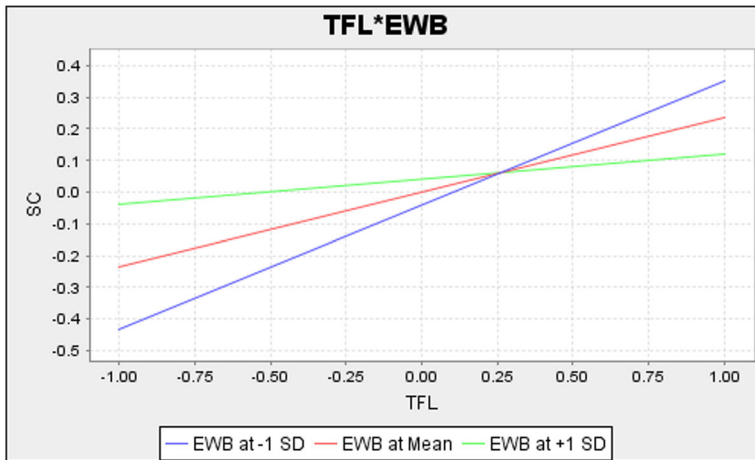
	EWB	SC	TFL	TSL
EWB	–			
SC	0.385	–		
TFL	0.583	0.741	–	
TSL	0.322	0.810	0.808	–

Source: Author's own computation.

The structural model shows the pattern of the hypothesized relationship of the constructs. H1 stated that transactional leadership is positively related to employee safety compliance. The result showed significant and positive relationship between transactional leadership and safety compliance ( $\beta = 0.465$ ;  $t = 12.582$ ;  $p < 0.000$ ). Similarly, H2 illustrated that transformational leadership is positively related to employee safety compliance. The result depicted significant and positive relationship between transformational leadership and safety compliance ( $\beta = 0.235$ ;  $t = 5.227$ ;  $p < 0.000$ ). Moreover, H3 directed that employee well-being moderates the relationship between transactional leadership and safety compliance. The result revealed that there is no relationship between transactional leadership, employee well-being and safety compliance ( $\beta = -0.039$ ;  $t = 0.553$ ;  $p > 0.581$ ). At last H4 posited that employee well-being moderate the relationship between transformational leadership



**Figure 3.** Structural model (direct relationships and interactions effects).  
Source: Author's own computation.



**Figure 4.** Interaction effect of transformational leadership and employee well-being on safety compliance.  
Source: Author's own computation.

and safety compliance. The result showed a significant but negative relationship among transformational leadership, employee well-being and safety compliance ( $\beta = -0.156$ ;  $t = 4.465$ ;  $p < 0.000$ ). (Figure 4)

The simple slope plot represents the association among independent, moderating and dependent variable. X-axis shows the independent variable whereas, y-axis

**Table 6.** Structural model assessment with interactions.

Hypothesis	Relationships	Beta	SE	T-value	P-value	Decision
H1	TSL -> SC	0.465	0.037	12.582	0.000	Supported
H2	TFL -> SC	0.235	0.045	5.227	0.000	Supported
H3	TSL*EWB ->SC	-0.039	0.071	0.553	0.581	Not Supported
H4	TFL*EWB ->SC	-0.156	0.035	4.465	0.000	Supported

Source: Author's own computation.

represents dependent variable. The red line shows the impact of independent variable on dependent variable except the interactions. Similarly, green line represents high level of moderating effect and blue line indicates low level of moderating effect. (Table 6)

## 7. Discussions and conclusions

The study examine the relationship among leadership styles and employee safety behavior with the moderating role of employee well-being. The findings showed that leadership styles (transactional & transformational) have significantly and positively associated to safety compliance. The findings were in line with the previous studies (Yang et al., 2009; Yukl, 2006) which states that leadership style can influence safety behavior of the employees. The findings provide additional support to the suggestions of Wu et al. (2008) and presume that leadership is the process of relationship between leaders and subordinates, with the help of this relations the leaders can strive their impact on the followers in order to achieve an organization's safety goals. In regard to the transactional leadership the finding exhibited that transactional leadership has significant and positive relationship with employee safety behavior. The finding was similar with the work of Clarke (2013) which states that transactional leadership is a critical factor of employee safety behavior. Transactional leaders influence their followers to accomplish the specified task in order to attain the desired outcomes by encouraging them with rewards and benefits. Similarly, transactional leaders are more focused on rewards and employee performance which could be the reason for the positive relationship between transactional leadership and safety behavior. The findings are also congruent to SLT. Management should employ leadership styles at workplace to reach at the maximum level of safety behavior in healthcare. When leaders inspires their followers by participating in safety related activities they create more sensible and responsible individuals at workplace.

Transactional leadership appears as a significant factor to predict employee safety behavior which explain the goals to the followers and determine that how to achieve that goals. Moreover, transactional leaders explicate the assigned task to the subordinates and communicate the successful execution of the assigned tasks, which influence safety behavior of the employees. With respect to transformational leadership the study showed a positive association between transformational leadership and employee safety behavior. One plausible justification for this result could be that leadership consult with employees in decision making process. The employees who are close to work are the best person to recommend improvements.

The result give the additional support to the findings of Shen et al. (2017) and conclude that employee feel comfort to express about safety affairs with their

transformational leaders. The result could be attributed to the fact that transformational leaders focuses on the positive change in their followers which transform followers into leaders. One reason of this result could be the quiet and sacrifice nature of the transformational leaders in which leaders give priority to their followers ahead of themselves. Interestingly, results also concluded that employee well-being has significant but negative relationship with transformational leadership and safety behavior. Which means that transformational leadership relates to employee safety behavior when employee experience low level of well-being instead of high level of well-being. One plausible reason for this result could be the lack of trust on the transformational leaders. Lack of trust may badly effect the worker's personal safety as the workers failed to focus on it (Mayer & Gavin, 2005).

Another possible reason of this result could be the gender of the respondents. Most of the participants (75.7%) of the present study were male. Pakistan is a male dominance country (Akram, 2018; Nasir et al., 2019). Therefore, there is a difference in a behavior of men and women. Similarly, female response to an incident is totally different from a man response. However, no moderating effect was found on the relationship between transactional leadership, employee well-being and safety behavior. Pakistan is a high power distance country (Bashir et al., 2012). In high power societies there is only one way communication (leader to worker) (Tear et al., 2016). Hence, high power distance could be a hurdle which influence the relationship between a leader and a worker which affect safety behavior of the employees.

### **7.1. Managerial implications**

Globally, leadership considered as a crucial part in the success of any organization. Leadership can increase the worker's involvement in safety related matters. Organization which have an adequate leadership and better employee well-being leads to a save work environment for the workers. Therefore, the study provides some implications for the management. In order to evolve leadership and to develop safety behavior organizations must flourish strategies and regulations to support safety behaviors. For example, workplace ethics must be given with explicit parameters relating organizations safety procedures and policies. In addition, leadership give a competitive edge to organizations and assist to keep a balance between leadership and followers. Leadership is a criteria which promote a positive approach in a society and indicates that how an organization values their workers. It is recommended that organizations should focus on the obstacles which cause delay in leadership abilities and practices in order to achieve a safety behavior. Moreover, the study advocates that management should invest in fulfilling the psychological needs of the workers to shine their basic workplace skills. The study also suggest that employees must portray a safe behavior at workplace to avoid any bad incidents. Similarly, organization must hire the professional and employees with a safe behavior make the business environment friendly. Lastly, organization that are searching for implementing an accident free environment must review their employees' attitude, knowledge, awareness and behavior with respect to organizational policies.



## 7.2. Limitations and future recommendations

The present study have some limitations that directed towards future research. Firstly, cross-sectional data were collected using survey approach due to time constraints, hence, in future longitudinal data should be collected for further validation of the model. Secondly, data were gathered from Punjab, Pakistan, therefore, the results are limited to that specific province. Future studies must select the other provinces or countries to increase the generalizability of the results. Thirdly, the study measured only two styles of leaderships. Hence, other styles of leadership should be implemented in future studies to explore the impact of these styles. The fourth limitation of this study is that the study incorporated employee well-being and employee safety behavior as a uni-dimensional constructs, future studies must include their other dimensions in order investigate their importance. Fifthly, the study measured employee well-being as a moderating variable. Future studies may possibly include other variables such as trust and employee engagement to examine their outcomes. Lastly, this study selected employees of healthcare industry. Future studies may target the employees of other industries such as manufacturing, sports, food and banking. Furthermore, the present study adopted quantitative approach. Hence future studies could adopt qualitative style or mix mode to achieve a better understanding regarding leadership styles, employee well-being and employee safety behavior.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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