Leaders' Emotional Intelligence and Safety Citizenship Role Definitions and Behavior: The Mediating Effect of Self -Efficacy and Resilience

[1] **Hanan Meslhy Mohamed** & [2] **Alia Ibrahim Mohamed**

(1) Lecturer of Nursing Administration, Faculty of Nursing ,Zagazig University

(2) Assistant Professor of Nursing Administration, Faculty of Nursing, Zagazig University

Abstract

Background: Acts to protect the safety of others, attempting to prevent the development of accidents, and proactively seeking to improve organizational safety procedures and general workplace safety conditions were all examples of safety citizenship behavior. **Aim:** To examine the relation between leaders' emotional intelligence (EI), leaders' and nurses' safety citizenship role definitions and behavior, self- efficacy (SE), and resilience at Zagazig University Hospitals. **Design:** A descriptive correlational design was used for this study. **Sample**: A convenience sample of all available head nurses (200), in addition to a systematic random sample of 400 staff nurses. **Tools of data collection**: Head nurses questionnaire: composed of three parts; personal and job characteristics of head nurses, leaders' EI scale, and leaders' safety citizenship role definitions and behavior scale. As well, staff nurses' questionnaire: composed of four parts; personal and job characteristics of staff nurses, safety citizenship role definitions and behavior scale, general SE scale, and resiliency scale**. Results:** Leaders' EI was significantly and positively correlated to leaders' safety citizenship role definitions and behavior, staff nurses' safety citizenship role definitions and behavior, SE, and resilience P< 0.001. **Conclusion:** Self- efficacy was a partial mediator in the relation between leaders` EI and safety citizenship role definitions and behavior from both leaders and nurses. While, resilience was a full mediator in the relation between leaders' EI and safety citizenship role definitions and behavior from both the studied leaders and staff nurses. **Recommendations:** To provide a training program for both staff nurses and nurse managers about safety citizenship role definitions and behavior and encourage them to apply it, to improve their organization's safety performance.

Keywords: EI, Safety Citizenship Role Definitions and Behavior, Self- efficacy and Resilience.

Introduction:

The current COVID-19 pandemic has caused havoc on global economic marketplaces and regular work routines. Their leaders are confronted with extraordinary circumstances that are posing serious business challenges. This makes it particularly challenging for leaders to ensure that their people are able to work properly. As a result, leaders must be aware of their employees' emotions and be able to deal with them successfully (Narula, 2020). EI (EI) has proven critical to any organization's success in recent years. It is constantly broadening its scope. Any organization's performance is totally determined by how well it manages its employees' emotional capabilities.

EI is also essential for boosting an individual's effectiveness. Leaders, who are able to recognize and manage their own emotions, as well as demonstrate self-control and the ability to delay satisfaction, serve as role models for their followers, winning their trust and respect (Guerrero et al, 2020) . EI is a common factor that determines how people progress in their lives, careers, and social skills, as well as how they deal with frustration, manage their emotions, and get along with others. The distinction between a bright person and a brilliant manager is determined to be linked to a person's EI. In the end, the EI determines how people interact with one another and interpret emotions (Vashisht & Luxmi, 2019).

The EI is the ability to monitor one's own and others' emotions, to distinguish throughout them, and to utilize that information to influence one's thinking and actions (Vila-Vazquez et al, 2018). As well, EI as an individual's ability to perceive, appraise, and express emotion accurately; the ability to access and generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the

ability to regulate emotions to promote emotional and intellectual growth (Tofighi et al, 2020).

Self-awareness, self-management, social awareness, and relation management are the four primary groupings of EI abilities that include our understanding of people (Narula, 2020). In addition, Social skills, conscientiousness, reliability, and integrity are EI attributes that create trust, which can help work groups to become more cohesive (Vashisht & Luxmi , 2019).

Emotional honesty, self-confidence, and emotional resilience are EI attributes that promote excellent performance and organizational citizenship behaviors. (OCBs). Safety citizenship (SC) is described as discretionary activities that are not directly or explicitly acknowledged by the formal incentive system and that, in aggregate, improve the proper operation of the organization. It was developed under the concepts of OCB (Dugger & Mccrory, 2021). The SC actions are centered on improving others' and the organization's overall safety performance. The SC has been linked to behaviors including taking charge of improving safety policies and volunteering for safety initiatives or actions (Finely et al, 2019).

Acts to safeguard the safety of others, attempting to prevent the development of accidents, and proactively seeking to enhance organizational safety systems and general circumstances of safety in the workplace were all examples of safety citizenship behaviors. Taking on additional assignments, voluntarily assisting others at work, staying current with developments in one's profession, promoting and protecting the organization, maintaining a positive attitude, and tolerating workplace inconveniences are all examples of good citizenship behaviors (Conchie & Donald, 2019).

Leaders' EI leads to increased work engagement, job satisfaction, and employee behaviors through improved resilience, SE, flexibility, effectiveness, and quality performance (Guerrero et al, 2020). The ability to manage one's behavior, tasks, performance, and efficiency is referred to as SE (SE). Employees with a higher level of SE have a

better likelihood of accomplishing their goals and objectives. It ensures that workplace goals are met and that workers are treated with respect (Lai et al, 2020). Resilience refers to an individual's ability to bounce back from adversity, heal, grow stronger than before, and develop skills such as vocational, sociological, Psychological distress and strain. cultural, and literary even in the face of

Individuals with resilience are able to deal with situations that are constantly changing and challenging (Oliver, 2020). The concept of resilience can be interpreted in a variety of ways; however the current study focused on resilience as a personality trait. As a result, it is a positive personality trait that supports flexibility and adaptation. It is a set of personality attributes that enables people to cope with stressful situations in a constructive way. In a summary, organizational success and well-being are tied to resilience (Pines et al, 2020).

Significance of the study

EI allows people to deal with a wide range of situations with maturity and balance. People who are emotionally intelligent have a strong sense of self, which aids them in understanding others, putting things in perspective, maintaining focus, and knowing what is important. They also have a positive attitude almost all of the time, are successful in whatever they choose to do, have high levels of work performance and personal productivity, and hence have higher job satisfaction.

EI is one of the factors that can influence the relation between employees and managers and their (SCB). The EI makes its own contribution to improve performance safety.

People with higher levels of SCB will be able to perceive their own emotions, regulate their emotions, and understand other people's emotions, and they will be able to use their emotions effectively for the organization's improvement. Safety citizenship activity is critical for increasing working group safety and promoting mutual support among nurses, and it may increase organizational success. So, this research investigated the relation between leaders' EI, safety citizenship role definitions

and behavior from leaders and coworkers, SE, and resilience among nurses.

Theoretical background:

According to Albert Bandura (1997& 1999) social cognitive theory (SCT), employee behavior is influenced by personal resources (e.g., leaders' EI and SE) and motivation (e.g., engagement of employees towards their work). According to the current study, leaders' EI is a crucial personal resource that promotes citizenship behavior via SE. Resilience is another personality attribute linked to EI, as

they are key factors to acquire in order to overcome a variety of difficulties and challenges at work (Cleary et al, 2018). Extant literature suggests that EI may encourage resilience (Maulding et al, 2012; Schneider et al, 2013 & Bande et al, 2015). Several studies have looked at the relation between EI and resilience, with a focus on service-based roles like retail staff, healthcare professionals, and administrative employees because they deal directly with patients (Cleary et al, 2018).
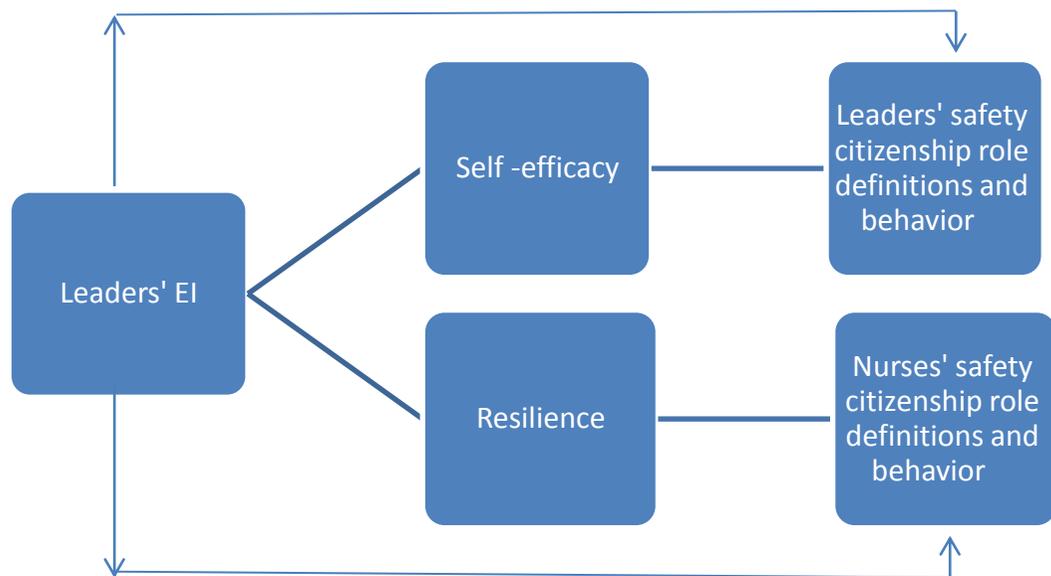

Figure (1): Theoretical Frame Work of the Study

The aim of the study

The present study aimed to examine the relation between leaders' EI, leaders' and nurses' safety citizenship role definitions and behavior, self- efficacy, and resilience at Zagazig University Hospitals. In addition, testing a new mediation model that investigates SE and resilience as mediators in the relation between leader's EI and safety citizenship role definitions and safety citizenship behavior from both leaders and nurses.

Research hypotheses:

H1: There is a positive relation between leaders' EI, safety citizenship role definitions and behavior, and nurses'

safety citizenship role definitions and behavior, SE, and resilience.

H2: SE mediates the relation between leaders' EI and leaders' safety citizenship role definitions and behavior.

H3: SE mediates the relation between leaders' EI and nurses' safety citizenship role definitions and behavior**.**

H4: Resilience mediates the relation between leaders' EI and leaders' safety citizenship role definitions and safety citizenship behavior.

H5: SE and resilience mediate the relation between leaders' EI and safety citizenship role definitions and behavior from both leaders and nurses**.**

Subjects and Methods:

Research design:

A descriptive correlational design was used for this study.

Study setting:

This study was conducted at all Zagazig University Hospitals (academic hospitals), Egypt,
which included two sectors involving eight teaching hospitals. The emergency sector included four hospitals; New-Surgical Hospital (600 beds), Internal-Medicine Hospital (322 beds), Emergency Hospital (185 beds), and the Delivery and premature hospital (57 beds). El-Salam sectors included four Hospitals; three of them provided free treatment, these were: Cardiac and Chest Hospital (212 beds), El-Salam Hospital (254 beds), and The Pediatric Hospital (220 beds) and the last one provided economic treatment, was El-Sadat Hospital (104 beds). With total capacity 1954 beds, these hospitals provide inpatient and outpatient services with a total number of 2446 staff nurses.

Subjects: The following subjects were included:

1. Head nurses group: A sample of convenience head nurses (200) from the above mentioned settings, were chosen according to the following inclusion criteria: had at least one year experience and accepted to participate in the study.

2. Staff nurses group: A systematic random sample of 400 staff nurses working in the above mentioned settings, were chosen according to the following inclusion criteria: Accepted to participate in the study and Have at least one year experience.

Sample size of staff nurses:

A stratified random sample was used. The required number of nurses from each hospital was calculated with the following formula (number of nurses in each hospital × required sample size / total number of nurses in all hospitals). Accordingly 400 nurses were chosen randomly as follows; New-Surgical Hospital (80 nurses), Internal Medicine Hospital (70 nurses), Emergency Hospital (20

nurses), Delivery and Premature Hospital (40 nurses), Cardiac and Chest Hospital (70 nurses), El-Salam Hospital (30 nurses), El-Sadat Hospital (50 nurses), and Pediatric Hospital (40 nurses).

Sample size:

A total of 2446 nurses was used, and by applying the following formula; [X² NP (1− P) / d² (N −1) + X² P (1− P)] (Krejcie & Morgan, 1970). The sample size was 400 nurses.

Tools of data collection:

Tool 1: Head nurses questionnaire sheet:

A questionnaire sheet used to collect data for this study and composed of three parts:

Part (1): Personal and Job Characteristics of head nurses developed by the researchers to collect data about: unit, age, marital status, educational qualification and years of experience.

Part (2): **Leaders' EI Scale:** It was developed by **Groves et al (2008)** to assess nursing leaders' EI level. This scale included 23 items subdivided into four subscales, namely; Perception and appraisal of emotions (6 items), facilitating thinking with emotions (5 items), understanding emotions (6 items), regulation and management of emotion (6 items). The responses of nursing leaders weremeasured on a five-point Likert scale ranged from 5 (Strongly agree) to 1 (Strongly disagree). The total score of this tool ranged from 23–115. Scores ≥ 92 indicated a high level of EI, from 69 to 91 indicated a moderate level, while scores ≤ 68 indicated a low level. The internal consistency of this tool was measured by Cronbach's alpha coefficient and it was 0.769.

Part (3): **Leaders' Safety Citizenship Role Definition and Behavior Scale:** It
was developed by **Hofmann et al (2003)** to rate the leaders' performance regarding safety citizenship role definitions and behavior. It consisted of 27 items which included 6 subdomains namely; Helping (6 items), Voice (4 items), Stewardship (4 items), Whistleblowing (5 items), Civic virtue (Keeping informed) (4 items), Initiating Safety-related change (4 items),

The responses of nursing leaders weremeasured on a five-point Likert scale ranged from 5 (frequently engages in this behavior) to 1 (did not engage in this behavior). The total score of this tool ranged from 27–135, and classified as: from 85% to 100 % reflected more frequent performance of the safety citizenship role definitions and behavior ; from 60% to 84% indicated moderate performance of the behavior, and less than 60 % indicated not frequently engaged in this behavior [20]. The reliability of the instrument was estimated using Cronbach's alpha, it was 0.960.

Tool 2: Staff nurses' questionnaire (Composed of four parts)**:**

Part 1: Personal and Job Characteristics of Staff Nurses developed by the researchers to collect data about: Unit, age, marital status, educational qualification and years of experience.

Part 2: Safety Citizenship Role Definitions and Behavior Scale: It was developed by **Hofmann et al (2003)** to assess staff nurses' perception of core safety citizenship role definitions and behavior as part of their job. It consisted of 27 items as previously mentioned The responses of nurses were measured on a five-point Likert scale ranged from 5 (definitely above and beyond what was expected for her/his job) to 1 (expected part of my job). Total score of this tool ranged from 27–135, scores $\geq$ 118 indicated a high positive perception of safety citizenship role definitions and behaviors, while scores < 65 indicated a low perception of role behavior **Hofmann et al (2003)**. The internal consistency of this tool was measured by Cronbach's alpha coefficient and it was 0.734.

Part (2): **General SE Scale:** It was developed by **Sherer et al (1982)** composed of 9 items to measure 3 aspects of nurses behavior; the desire to start behavior, the desire to expand the effort to complete the task and be different to cope with obstacles (e.g., he/she was confident that he/she could deal efficiently with unexpected events.)

The staff nurses' responses were measured with a five-point Likert scale ranged from 1 (Not at all true) to 5 (Exactly true). The total score of this tool ranged from 17–85. The scores were categorized into satisfactory level (nurses who scored $\geq$ 75% on SE based questions) and unsatisfactory level (nurses who scored <75% on SE based questions) **Sherer et al (1982)**. The internal consistency of this inventory was assessed by using Cronbach's alpha coefficient and it was 0.89.

Part (4): **Resiliency Scale**: It was developed by **Siu et al (2006)** to assess staff nurses' resiliency level. This scale included 9 items (e.g., he/she felt capable of overcoming the present or any future difficulties and problems might face such as resolving dilemmas or making difficult decisions). The nurses' responses were measured with a five-point Likert scale ranged from 1 (very inaccurate) to 5 (very accurate). The total score of this tool ranged from 9–45. Scores $\geq$ 39 indicated a high level of staff nurses' resiliency, while scores < 27 indicated a low level (Jackson & Watkin, 2004). The internal consistency of this scale was assessed by using Cronbach's alpha coefficient and it was 0.651.

Field Work:

Data collection took four months from the beginning of March 2021 till the end of June 2021 during morning and afternoon shifts. The preparatory phase was done by explaining briefly the purpose of the study to both head nurses and staff nurses. The time consumed to answer each questionnaire ranged from 25 to 40 minutes. Data were collected from nurses in different hospitals.

Pilot Study:

A pilot study was carried out on 40 nurses (10% of the staff nurses study sample) to check the clarity and applicability of the tools and to estimate the time needed to fill in the questionnaire by each participant. Required modifications were done and the subjects who participated in the pilot study were excluded from the main study sample.

Content Validity:

Data were collected using a self-administered questionnaire, after the translation of the instrument to Arabic. The content and face validity were established by a jury of experts (7 professors & assistant professors) from academic nursing staff, Zagazig, El-Fayoum and Ain-Shams Universities. According to their opinions, all necessary modifications were done.

Administrative and Ethical Consideration:

Approval to conduct the study was obtained from the medical and nursing directors of the hospitals and the head nurses of the units after explaining the aim of the study. The participants were informed that their participation in the study was completely voluntary and the cover letter introducing the study addressed the confidentiality of the participants. Consent was established with the completion of the questionnaires.

Statistical Analysis:

Data entry and statistical analysis were done using the Statistical Package for Social Science (SPSS), version 20.0. The cleaning of data was done to be sure that there was no missing or abnormal data. Data were presented using descriptive statistics in the form of frequencies and percentages for categorical variables, and means and standard deviations for continuous variables. Pearson correlation analysis was used for assessment of the interrelations between total scale scores. Multiple Linear inner regression analysis was used to assess the mediation effect.

Results:

Table (1) clarifies the personal and job characteristics of the head nurses. As shown in this table age for 44.5% of head nurses was less than 30 years. As well, the highest percentages of them had less than 10 years of experience and were married (48% & 66.5%, respectively).

Table (2) states the personal and job characteristics of the staff nurses. As shown in this table 51.3% of the staff nurses were within the age group 30 to 40 years. As well, the highest percentages of them were less than 10 years of experience, married, had technical diploma of nursing, and working in medical departments (60.3%, 78.8%, 60.5%, & 51.0% respectively).

Figure (1) presents the levels of leaders' EI and leaders' safety citizenship role definitions and behavior. It was clear from this figure that the highest percentages of the head nurses had high levels from both EI and safety citizenship role definitions and behavior (54% & 55. 5%, respectively).

Figure (2) illustrates the levels of SE, resilience and safety citizenship role definitions and behavior among the studied staff nurses. As observed from the figure the highest percentages of the staff nurses had high levels from self-efficacy and resilience, (71.5% & 53. 7% respectively), while 59.5% had moderate perception level from safety citizenship role definitions and behavior.

Table (3) displays that the leaders' EI was significantly and positively correlated to leaders' safety citizenship role definitions and behavior, nurses' safety citizenship role definitions and behavior, self- efficacy, and resilience (r=0.231, P= 0. 001; r=0.382, P= 0.000; r=0.227, P= 0.001; & r=0.417, P= 0.000 respectively). In addition, there was a significant and positive correlation between SE, safety citizenship role definitions and behavior from both leaders and nurses (r=0.227, P= 0.001& r=0348, P= 0.000, respectively). Moreover, there was a significant and positive correlation between resilience, safety citizenship role definitions and behavior from both leaders and nurses(r=0.417, P= 0.000& r=0.479, P= 0.000, respectively).

Mediator explanation: Three conditions must be met to establish a mediator. First, the independent variable (leaders' EI) must be related to the mediators (SE & resilience). Second, the mediators (SE & resilience) must be related to the dependent variables (leaders' safety citizenship role definitions and behavior, in addition to nurses' safety citizenship role definitions and behavior). Third, significant relation between independent variable (leaders' EI) and dependent variables (leaders' safety citizenship role definitions and behavior, in addition to nurses' safety citizenship role definitions and behavior) was reduced (partial mediation) or no longer be significant (full mediation) when controlling for the mediators (SE & resilience) (Saks & Rotman, 2006). First condition had been met as described previously in Table (3). For the third condition, it

had been met as described as follows: in tables 4-7 through using linear regressions.

Table 4 shows that when self- efficacy was included in the leaders' EI – leaders' safety citizenship role definitions and behavior interaction model, the regression coefficient of leaders' EI was reduced from β= 0.421, P = 0.001 to β=0. 333, P= 0.010 (significant). Additionally, leaders' EI responsible for the variation in leaders' safety citizenship role definitions and behavior (R2= 0.054), in the direct model and this effect increased to (R2=0.083) in the mediated model. Accordingly, this confirmed that SE is a partial mediator in the relation between leaders' EI and leaders' safety citizenship role definitions and behavior.

Table (5) indicates that when SE was included in the leaders' EI – nurses' safety citizenship role definitions and behavior interaction model, the regression coefficient of leaders' EI was reduced from β= 0.299, P = 0.0001 to β=0. 236, P= 0.0001 (significant). Additionally, leaders' EI responsible for the variation in nurses' safety citizenship role definitions and behavior (R2= 0.123), in the direct model and this effect increased to (R2=0.192) in the mediated model. Accordingly, this confirmed that self- efficacy is a partial mediator in the relation between leaders' EI and nurses' safety citizenship role definitions and behavior.

Table (6) reveals that when resilience was included in the leaders' EI– leaders' safety citizenship role definitions and behavior interaction model, the regression coefficient of leaders' EI was reduced from β= 0.421, P = 0.001 to β=0. 195, P= 0.230 (no significant). Additionally, leaders' EI responsible for 5.4% of the variation in leaders' safety citizenship role definitions and behavior (R2= 0.054), in the direct model and this effect increased to 17.4 % (R2=0.174) in the mediated model. Accordingly, this confirmed that resilience is a full mediator in the relation between leaders' EI, leaders' safety citizenship role definitions and behavior.

Table (7) explains that when resilience included in the leaders' EI, nurses' safety citizenship role definitions and behavior interaction model, the regression coefficient of leaders` EI was reduced from β= 0.299, P = 0.001 to β=0. 034, P= 0.644 (not significant). Additionally, leaders' EI responsible for the variation in nurses' safety citizenship role definitions and behavior (R2= 0.123), in the direct model and this effect increased to (R2=0.230) in the mediated model. Accordingly, this confirmed that resilience is a full mediator in the relation between leaders' EI, nurses' safety citizenship role definitions and behavior.

Table (1): Frequency Distribution of Personal and Job Characteristics of the Studied Head Nurses (n=200)

Variables	N	%
Age (in years)		
• **<30**	89	44.5
• **30-40**	76	38.0
• **>40**	35	17.5
Years of experience		
• **<10**	96	48.0
• **10-20**	69	34.5
• **>20**	35	17.5
Marital status		
• **Single**	36	18.0
• **Married**	133	66.5
• **Widow**	31	15.5

Table (2): Frequency Distribution of Personal and Job Characteristics of the Studied Staff Nurses (n=400)

| Variables	N	%
Age (in years)		
• <30	149	37.3
• 30-40	205	51.3
• >40	46	11.5
Years of experience		
• <10	113	28.3
• 10-20	241	60.3
• >20	46	11.5
Marital status		
• Single	65	16.3
• Married	315	78.8
• Widow	20	5.0
Qualification		
• Diploma of nursing	158	39.5
• Technical diploma of nursing	242	60.5
Department		
• Medical	204	51.0
• Surgical	129	32.3
• ICU	67	16.8
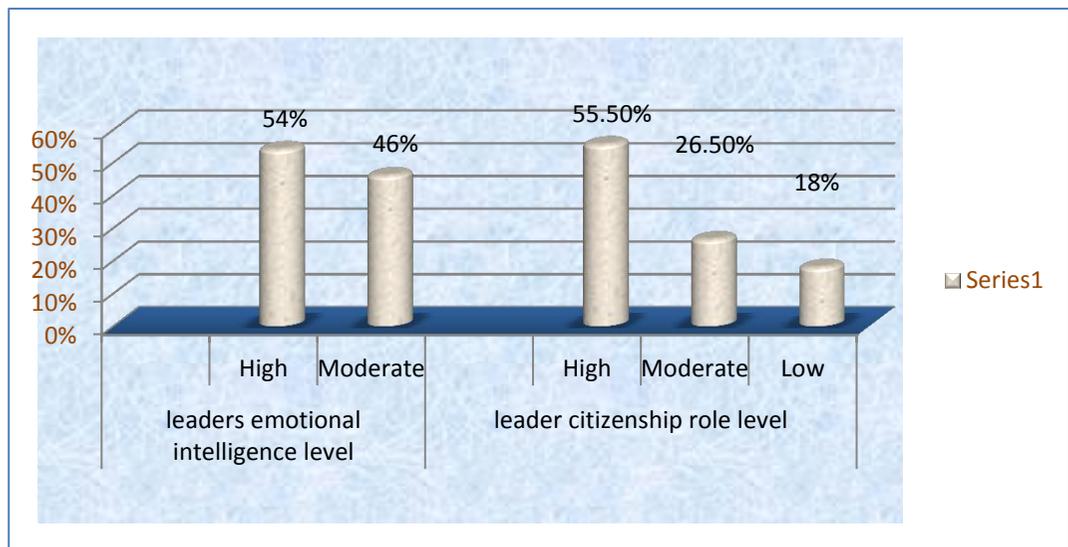
Figure (1): Levels of Leaders' EI and Leaders' Safety Citizenship Role Definitions and Behavior.
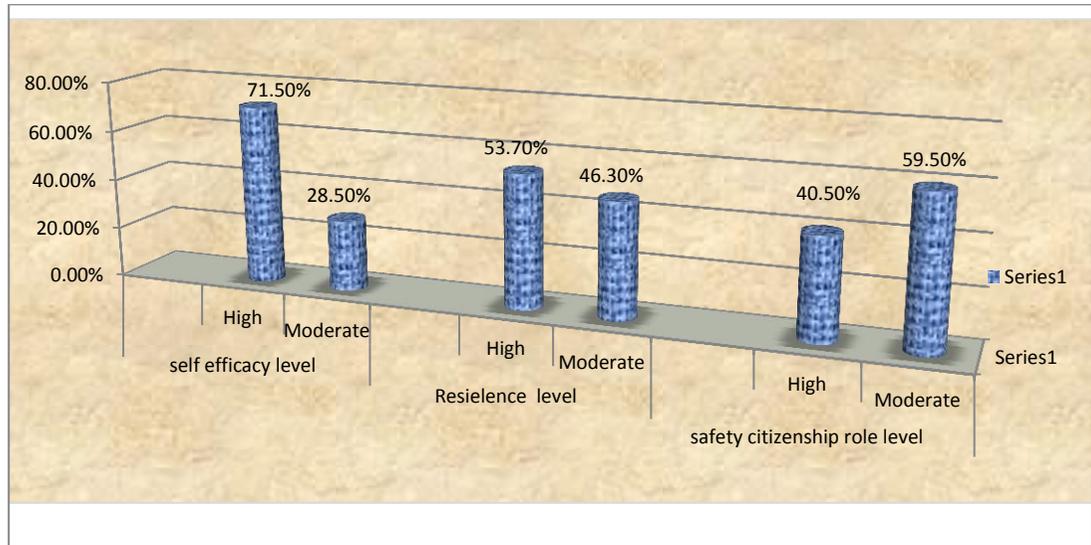
Figure (2): Levels of SE, Resilience and Safety Citizenship Role Definitions and Behavior among the Studied Staff Nurses (n=400).

Table (3): Correlations between Leaders' EI, Leaders' Safety Citizenship Role Definitions and Behavior, Nurses' Safety Citizenship Role Definitions and Behavior, Self- Efficacy, and Resilience.

Study variables	Leaders' safety citizenship role definitions and behavior		Leaders' EI		Nurses' safety citizenship role definitions and behavior		Self- efficacy	
Leaders' EI	**r**	**p**	**r**	**p**	**r**	**p**	**r**	**p**
	.231**	.001						
Nurses' safety citizenship role definitions and behavior	.382**	.000	.351**	.000				
Self- efficacy	.227**	.001	.270**	.000	.348**	.000		
Resilience	.417**	.000	.690**	.000	.479**	.000	.184**	.009

* Statistically significant at P <0.05** highly statistically significant at P < 0.001.

Table (4): Regression Analysis to Study the Mediating Effect of Self- Efficacy on the Relation between Leaders` EI and Leaders' Safety Citizenship Role Definitions and Behavior.

Items	R	R2	Unstandardized coefficient		t	sig
			B	**Std. Error**		
* leaders' EI	.231	.054	.421	.126	3.346	.001
*** leaders' EI	.288	.083	.333	.129	2.586	.010
*** Self- efficacy			.436	.174	2.509	.013

*Statistically significant at P <0.05** highly statistically significant at P < 0.001.

Table (5): Regression Analysis to Study the Mediating Effect of Self- Efficacy on the Relation between Leaders` EI and Nurses' Safety Citizenship Role Definitions and Behavior.

Items	R	R2	Unstandardized coefficient		t	sig
			B	**Std. Error**		
* leaders' EI	.351	.123	.299	.057	5.278	.0001
*** leaders' EI	.439	.192	.236	.057	4.172	.0001
*** Self- efficacy score			.313	.076	4.101	.0001

*Statistically significant at P <0.05** highly statistically significant at P < 0.001.

Table (6): Regression Analysis to Study the Mediating Effect of Resilience on the Relation between Leaders` EI and Leaders' Citizenship Role Definitions and Behavior.

Items	R	R2	Unstandardized coefficient		t	sig
			B	**Std. Error**		
* leaders' EI	.231	.054	.421	.126	3.346	.001
*** leaders' EI	.417	.174	0.195	.162	1.204	.230
*** resilience score			1.445	.262	5.506	.0001

*Statistically significant at P <0.05** highly statistically significant at P < 0.001.

Table (7): Regression Analysis to Study the Mediating Effect of Resilience on the Relation between Leaders` EI and Nurses' Citizenship Role Definitions and Behavior.

Items	R	R2	Unstandardized coefficient		t	sig
			B	**Std. Error**		
* leaders` EI	.351	.123	.299	.057	5.278	.0001
*** leaders` EI	.479	.230	.034	.073	.463	.644
*** resilience score			.621	.119	5.222	.0001

*Statistically significant at P <0.05** highly statistically significant at P < 0.001.

Discussion

EI and citizenship behavior are the most significant factors in today's workplace for managers to display their leadership action and good citizenship behavior to their subordinates in order to achieve great performance. Because it is the types of human intelligence that contribute to human citizenship behavior in enhancing employee productivity in firms, EI is the dependent variable (Sharma & Mahajan, 2017).

In relation to the leaders' EI level, the current study results exhibited that more than half of the head nurses had a high level of EI. This finding could be related to the fact that through maintaining close relations with nurses and coworkers, the head nurses are able to use their abilities to catch up on their state of consciousness, improve self-management, and partially recognize their own and others' emotions. Furthermore, head nurses must recognize their power in various situations,

comprehend how these forces affect emotions and behaviors, and appropriately analyze various situations that are based on such energy dynamics.

This result is consistent with a study carried out in Bahrain by AlZgool et al (2020) entitled Covid-19 and work engagement: Understanding the nexus of leader's EI, SE and resilience, and found that the leaders' had a high level of EI. In agreement with this finding, Miao et al (2019), who studied Leader EI and subordinate job satisfaction: A meta-analysis of main, mediator, and moderator effects, and reported that, the leaders' had a high level of EI. In the same direction, Neil, et al (2018), who examined Leader behavior, EI, and team performance at a UK government executive agency during organizational change and concluded that, the leaders had a high level of EI.

Concerning the leaders' safety and citizenship role definitions and behavior the present study results showed that more than half

of them had a high level of safety and citizenship role definitions and behavior. The possible explanation for this finding could be attributed to the leaders are familiar with the advantages and disadvantages, requirements, benefits, and knowledge needed to manage safety and citizenship role definitions and behavior in the hospital, which could lead to increased safety behavior, improved subordinate safety commitment, and fewer work-related accidents. In accordance with this study finding, a study carried out in USA, by Dugger and McCrory (2021) on the relation between EI and safety citizenship among Army aviators, revealed that the leaders had a high level of safety and citizenship role definitions and behavior.

Regarding the levels of SE among the studied staff nurses, the results of this study showed that more than two thirds of them had high level of self- efficacy. This means that the nurses who have higher SE are always ready to accept challenging tasks; they always do their tasks with full enthusiasm and achieve the organizational goals by tackling all the obstacles they may face at the workplace. These results go in same line with a study done by Carter et al (2018), who studied the effects of employee engagement and SE on job performance: A longitudinal field study and found that the employees had high level of SE.

As regards the levels of resilience among the studied staff nurses the results of this study showed that more than half of them had high level of resilience. This could be because the nurses had the flexibility and adaptability to deal with constantly changing and complex events, meanwhile also managing the stressful environment inside the hospital in a positive way. The current study finding is in agreement with several studies as those done by Bajaj and Pande (2016) Rodríguez- Fernández et al (2018). and Sagone and De Caroli (2020) who concluded that when individuals were flexible and optimistic, they had a significant influence on organizational culture, which in turn enabled individuals to handle the stressful environment in a positive manner, as well the highest percentages of the study participants had high level of resilience.

Concerning the staff nurses' safety and citizenship role definitions and behavior, the present study results showed that more than half of the staff nurses had moderate safety level of citizenship role definitions and behavior. The possible explanation for these findings is that leaders' EI and safety and citizenship role definitions behavior play a key role in enhancing nursing staff behaviors in the hospital, which has a beneficial impact on safety behavior in terms of role definition, participation, and compliance. These activities may boost nurses' self-esteem and confidence, which may lead to better perceptions of safety and citizenship role definitions and behavior.

This current study result is in agreement with a study conducted in Taiwan by Lu and Kuo (2017), who studied the effect of job stress on self-reported safety behavior in container terminal operations: The moderating role of EI and found that the employees had a moderate level of safety and citizenship role definitions and behavior.

Regarding correlations between leaders' EI, leaders' safety citizenship role definitions and behavior, nurses' safety citizenship role definitions and behavior, self- efficacy, and resilience, the present study findings reported that there were highly statistically significant and positive correlations among leaders' EI, leaders' safety citizenship role definitions and behavior, nurses' safety citizenship role definitions and behavior, self- efficacy, and resilience. This might be due to that leaders with high EI influence employee behavior as voluntary behavior of construction personnel, which means safety citizenship behavior, in a way that encourages them to act in more extraordinary ways than is normally required and to integrate into the organization's goal and vision. Additionally, those leaders encourage employees to participate in safety performance and meet the organization's safety goals, as well as improve organizational and employee efficacy and assist employees' in becoming resilient to any risky behaviors or occurrences. Furthermore, the leader's citizenship improves organizational efficiency by helping to enhance output, improve the quality of nursing services provided, and decrease patient complaints.

These findings were in accordance with those of Li et al (2020), who carried out a study, in China, to assess relation between safety leadership, safety attitude and safety citizenship behavior of employees and clarified that the

safety leader was positively related to the safety attitude, and it could further promote the SCB of employees. In addition, safety attitude had a positive impact on employee SCB. In the same line, Marrio et al (2018) and Wu et al (2019) detected that there was a significant relation between leadership and behavioral safety in some high-risk organizations.

Similarly, O'Dea and Flin (2020) pointed out that senior managers could directly influence safety behaviors as well as the atmosphere and expectations of the organization and enterprise. Previously, Skeepers and Mbohwa (2021) stated that the SCB was verified to be positively influenced by Strengthening the leadership and communication ability of safety personnel and creating a good safety atmosphere on site which would help to improve safety performance. Furthermore, Mullen et al (2017) believed that leaders' attention to safety behaviors and measures taken for safety issues could significantly affect employees' attitudes and views on safety, which can further transform into their own behavior and the SCB. Consistent with the previous findings, Fuller (2017) revealed that leader's citizenship behavior linked to EI as behaviors or attitudes of individuals showed potential beneficial outcomes for organizations.

As regards, regression analysis to study the mediating effect of self- efficacy on the relation between leaders` EI and leaders' safety citizenship role definitions and behavior and nurses' safety citizenship role definitions and behavior. The present research findings indicated that, SE was a partial mediator in the relation between leaders' EI, leaders' safety citizenship role definitions and behavior and nurses' safety citizenship role definitions and behavior. This could be explained as the EI is important in the relation between employees and managers, as well as organizational citizenship behavior and safety citizenship behavior. People with a better degree of citizenship behavior will be able to identify their own emotions, regulate them, and understand the feelings of others, when it comes down to helping fellow individuals to develop and use their emotions effectively for the improvement of the organization. In addition, leaders' EI reinforces SE, which can, in turn, enhance followers' citizenship behavior. As well, employees' interest in, and connection to, an organization can be demonstrated by a leader's

citizenship behavior, which includes helping coworkers with work-related problems, not complaining about minor issues, behaving courteously to coworkers, and talking appreciatively about the organization to outsiders.

These study findings align with those of, Guerrero-Barona et al (2020) who investigated the role of SE and the dimensions of EI and detected a positive relation with work engagements and SE. As well, Lu and Kuo (2017) in a similar study reported that EI had a positive association with safety behaviors; suggesting that high EI would generate higher safety standards. In the same context, Narayanan (2019) who conducted a study at UK to determine the relation of EI with organizational citizenship behavior and mentioned that, the attributes of EI i.e, self-awareness, understanding emotion, ability to sense emotion and acknowledge emotion, goal setting and its achievement, believing to be a competent person, self-motivation, and self-encouragement was positively significantly related with the dimensions of citizenship behavior.

In addition, Keshav and Parul (2017) demonstrated that the expression of EI along with the construction of organizational citizenship behavior ultimately increase their productivity, which in turn rises the functioning of the organization. Thus, this work indicates that EI is positively associated with the behavioral citizenship of the organization among employees in India. As well, Sepehrikia et al (2018) showed that there were significant and positive relations between EI and their constituents (including self-awareness, self-management, social awareness, & relation management) to the behavioral citizenship of organizations within individuals. Leaders' EI, therefore, can be seen as crucial in times of crisis like that of COVID-19 pandemic to enhance efficacy levels of employees and to facilitate them further safety performance and attitude that enhance safety citizenship behavior.

Concerning the regression analysis to study the mediating effect of resilience on the relation between leaders' EI and safety citizenship role definitions and behavior from both leaders and staff nurses; the current research findings indicated that, resilience was a full mediator in the relation between leaders' EI and leaders' safety citizenship role definitions and behavior from

both leaders and staff nurses. This could be attributed to the emotionally intelligent leaders who have the ability to positively guide nurses' thinking and action processes, particularly in times of crisis, such as the COVID-19 pandemic, which necessitates a great deal of effort and support from leaders to assist nurses in adapting to, and coping with, existing sufferings and hardships, in addition to assisting employees in demonstrating better behaviors and outcomes at such a crucial stage.

In agreement with Dugger and McCrory (2021) in their very recent research, which studied the relation between EI and safety citizenship among Army aviators, and found that the leaders had a high level of safety and citizenship role definitions and behavior, and mentioned that resilience is a full mediator in the relation between leaders' EI and leaders' safety citizenship role definitions and behavior. In the same way, a study conducted, in Italy, by Petitta et al (2017) who studied the disentangling roles of safety climate and safety culture: Multi-level effects on the relation between supervisor enforcement and safety compliance and highlighted that, the employee safety compliance was a function of supervisor safety leadership, as well as safety compliance and resilience mediated the relation between emotionally skillful leaders and safety citizenship behaviors among the studied employees.

In the same direction scattered studies done in Pakistan, by Chughtai et al (2020) Barlett and Barlett (2019) and found that, emotionally well-resourced leaders hold the ability of a healthier understanding of others' feelings and emotional state, if they felt that their colleagues were upset, they optimistically tend to help and encourage them. Moreover, resilience and mindfulness were mediators in the relation between EI and organizational citizenship behavior. Furthermore, several recent studies were done by Guerrero et al (2020), Lai et al (2020), and Oliver (2020) and concluded that leaders' EI played a vital role in improving the behaviors of the personnel within the organization. Leaders' EI leaded to work engagement, safety behavior and job satisfaction of employees through improving resilience, SE, adaptability, effectiveness, and quality performance especially in crisis time of COVID-19 pandemic.

Conclusion

The studied Leaders' EI had highly statistically significant on safety citizenship role definitions and behavior for staff nurses and head nurses. As well, SE is a partial mediator in the relation between leaders' EI and safety citizenship role definitions and behavior from both leaders and nurses. While, resilience was a full mediator in the relation between leaders' EI and safety citizenship role definitions and behavior from both leaders and nurses.

Recommendations

In light of the study findings, the following recommendations are proposed for the human resources' management department to:

- Develop an instructional program for both staff nurses and nurse managers about EI focusing on up-to-date knowledge, and teaching them how to appraise and regulate their emotions in a positive way that affects their outcomes.

- Conduct intervention program for both staff nurses and nurse managers about resilience, to adopt and overcome the varying obstacles and hardships at the workplace during crisis period such as COVID-19 pandemic.

- Provide a training program for both staff nurses and nurse managers about safety citizenship role definitions and behavior and encourage them to apply it, to improve their organization's safety performance.

- Encourage nurse managers to involve nursing personnel in decisions affecting the safety of their jobs.

- Encourage nurse managers to share their experiences, ideas, use a free flow of information, trust, open and two ways communication to overcome the problems that they face at the workplace.

Further researches could be done about:

- The mediation effect of trust and organizational citizenship safety behavior in the relation between EI, and leadership effectiveness.

- The influence of safety leadership and transformational leadership on employee safety performance.

- ▪ The effect of servant leadership, EI, and SE on organizational citizenship behavior and employee performance.

References:

AlZgool M., Ahmed U., Munwar Hussain Pahi M.,& Ahmed, A.(2020). COVID-19 and work engagement: Understanding the nexus of leaders EI, SE and resilience in the banking sector of Bahrain. Revista Argentina de Clínica Psicológica; 29(3), 568-586. DOI: 10. 24205/ 03276716. 2020.760.

Bajaj B., & Pande N. (2016). Mediating role of resilience in the impact of mindfulness on life satisfaction and affect as indices of subjective well-being. Personality and Individual Differences; 93, 63-67.

Bande B., Fernández-Ferrín P., Varela J. A., & Jaramillo, F. (2015). Emotions and salesperson propensity to leave: The effects of EI and resilience. Industrial Marketing Management; 44, 142-153. doi:https:// doi. org/ 10.1016/j.indmarman.2014.10.011

Bandura A. (1997). Self-self efficacy: The exercise of control. New York: Freeman.

Bandura A. (1999). Social cognitive theory: An agentic perspective. Asian Journal of Social Psychology, 2(1), 21-41. doi: https://doi.org/10.1111/1467-839X.00024.

Barlett C. P., & Barlett N. D. (2019). Using the risk and resilience approach to predict psychopathy in an emerging adult sample. Emerging Adulthood; 4(3), 186-191.

Carter W. R., Nesbit P. L., Badham R. J., Parker S. K., & Sung, L.-K. (2018). The effects of employee engagement and SE on job performance: a longitudinal field study. The International Journal of Human Resource management; 29(17), 2483-2502 doi: https:// doi. org/10. 1080/ 09585192. 2016.1244096.

Chughtai M,. Shah S,. Hafeez, M,. Ashfaq Ahmad ,S,.& Hussain, A,.(2020). EI and organizational citizenship behavior: Psychopathic trait as mediator and mindfulness as moderator. International Journal of Advanced Science and Technology; 29(8), 317-333.

Cleary M., Visentin, D., West, S., Lopez, V., & Kornhaber, R. (2018). Promoting EI and resilience in undergraduate nursing students: An integrative review. Nurse Education Today; 68, 112-120. doi: https:// doi. org/ 10. 1016/j.nedt.2018.05.018

Conchie S.M., & Donald I.J. (2019).The functions and development of safety-specific trust and distrust. Saf. Sci; 46, 92–103.

Dugger Z., & Mccrory B. (2021). EI and safety citizenship among army. International Journal of aviation; 8,1. Available at https://commons.erau.edu/ijaaa/vol8/iss1/5

Finley K., Riggs S., Otto, J., & Ward, N. J. (2019). An assessment of traffic safety culture: Exploring traffic safety citizenship. https:// western transportation in stitute.org.

Fuller J. B., (2017). Organizational behavior. Pearson education (6th ed.), Retrieved from: http:// www. referenceforbus iness .com/management /Ob-Or / Organizational-Behavior.html

Groves K. McEnrue, M. & Shen W. (2008). Developing and measuring the EI of leaders. Journal of Management Development; 27 (2), 225-250. Available at www. emeraldinsight. com/ 0262-1711.htm.

Guerrero-Barona E., Rodríguez-Jiménez M., & Chambel M. J. (2020). Engagement in carers of persons with intellectual disabilities: The role of SE and EI. Disability and Rehabilitation; 42(10), 1397-1405. doi:https:// doi. org/ 10. 1080/ 09638288.2018.1526976.

Hofmann D., Morgeson F., & Gerras S.(2003). Climate as a moderator of the relation between leader–member exchange and content specific citizenship: Safety climate as an exemplar. Journal of Applied Psychology; 88 (1), 170–178. DOI: 10.1037/0021-9010.88.1.170.

Jackson R., & Watkin C. (2004). The resilience inventory: Seven essential skills for Selection & Development Review ; 20, 13-17.

Keshav S., & Parul, M. (2017). Relation between EI and organizational citizenship behaviour

among bank employees. Pacif. Bus. Rev. Intern; 9(11): 20-29.

Krejcie R.V. & Morgan D.W. (1970). Determining sample size for research activities. Educational and Psychological Measurements; 30: 607-610.

Lai F. Y., Tang H.-C., Lu S.-C., Lee Y.-C., & Lin C.-C. (2020). Transformational leadership and job performance: The mediating role of work engagement. SAGE Open; 10(1). doi:https:// doi. org/ 10. 1177/ 2158 24 40 19899085.

Li M., Zhai, H. , Zhang, J. , & Meng, X. (2020). Research on the relation between safety leadership, safety attitude and safety citizenship behavior of railway employees. International Journal of Environmental Research and Public Health; 17, 1864 .2 .

Lu C.-S., & Kuo, S.-Y. (2017). The effect of job stress on self-reported safety behaviour in container terminal operations: The moderating role of EI. Transportation Research Part F: Traffic Psychology and Behaviour;37, 10-26. doi:https:// doi. org/ 10.1016/j.trf.2015.12.008

Mario M., Gracia, F.,Tomás, I., & José, M.P. (2018). Leadership and employees' perceived safety behaviours in a nuclear power plant: A structural equation model. Saf. Sci; 49, 1118–1129.

Maulding W. S., Peters G. B., Roberts J., Leonard E., & Sparkman L. (2012). EI and resilience as predictors of leadership in school administrators. Journal of Leadership Studies; 5(4), 20-29. doi:https:// doi. org/ 10. 1002/ jls.20240

Miao C., Humphrey R. H., & Qian S. (2019). Leader EI and subordinate job satisfaction: A meta-analysis of main, mediator, and moderator effects. Personality and Individual Differences; 102, 13-24. doi: https:// doi.org/10.1016/j.paid.2016.06.056.

Mullen J., Kelloway E.K., & Teed M. (2017). Employer safety obligations, transformational leadership and their interactive effects on employee safety performance. Saf. Sci; 91, 405–412.

Narayanan K. (2019).The effect of EI on organizational citizenship Behavior. Asian Journal of Management research; 7 , 2.

Narula R. (2020). Policy opportunities and challenges from the COVID-19 pandemic for economies with large informal sectors. Journal of International Business Policy; 1-9.

Neil R., Wagstaff C. R., Weller E., & Lewis R. (2018). Leader behaviour, EI, and team performance at a UK government executive agency during organizational change. Journal of Change Management; 16(2), 97-122. doi:https: // doi. org/ 10. 1080/ 14697017. 2015. 1134624.

O'Dea A., & Flin R. (2020). Site managers and safety leadership in theoshore oil and gas industry. Saf. Sci; 37, 39–57.

Oliver T. (2020). The importance of subordinate EI development in the workplace. The International Trade Journal, 34(1), 162-172. doi:https:// doi. org/ 10. 1080/ 08853908. 2019. 1651680.

Petitta L., & Tahira M., Probst T., Barbaranelli C. , & Ghezzi V. (2017).Disentangling the roles of safety climate and safety culture: Multi- level effects on the relation between supervisor enforcement and safety compliance. Accident Analysis and Prevention; 99 77–89.

Pines E. W., Rauschhuber M. L., Cook, J. D., Norgan, G. H., Canchola, L., Richardson, C., & Jones, M. E. (2020). Enhancing resilience, empowerment, and conflict management among baccalaureate students: Outcomes of a pilot study. Nurse Educator, 39(2), 85-90. doi:10. 1097/ NNE. 000 00 0 0 0 0 0 000023.

Rodríguez-Fernández A., Ramos-Díaz E., Fernández-Zabala A., Goni E., Esnaola, I., & Goni A. (2018). Contextual and psychological variables in a descriptive model of subjective well-being and school engagement. International Journal of Clinical and Health Psychology; 16(2), 166-174. doi: https:// doi. org/10.1016/j.ijchp.2016.01.00

Sagone E., & De Caroli M. E. (2020). Relations between psychological well-being and resilience in middle and late adolescents. Procedia-Social and Behavioral Sciences; 141, 881-887

Saks A.M., & Rotman J.L.R. (2006). Antecedents and consequences of employee engagement. Journal of Managerial Psychology; 21(7): 600-619.

Schneider T. R., Lyons J. B., & Khazon S. (2013). EI and resilience. Personality and Individual Differences; 55(8), 909-914. doi:https:// doi. org/ 10. 1016/ j. paid. 2013. 07.460.

Sepehrikia A., Shirazi M., & Sargazi M. (2018). Relation between EI and organizational citizenship behaviors of employees among private banks in Zahedan. Elect. J. Biol; 12(4): 390-393.

Sharma K.; & Mahajan P.,(2017). Relation between EI and organizational citizenship behavior among bank employees. Pacif. Bus. Rev. Int; 9(11): 20-29.

Sherer M., Maddux J.E., Mercandante B., Prentice-Dunn S., Jacobs, B., & Rogers, R.W.(1982). The SE scale: Construction and validation. Psychol Rep;51(2):663-71.

Siu, O., Hui,H., Phillips,D., Lin,L., Wong,T., & Shi,K. (2006).A study of resiliency among Chinese health care workers: Capacity to cope with workplace stress Research Grants Council of the Hong Kong Special Administrative Region, China (Project no: LU3111/04H), and portion of the paper was presented at the 26th International Congress of Applied Psychology in Athens in July.

Skeepers N.C., & Mbohwa C. A. (2021). Study on the leadership behaviour, safety leadership and safety performance in the construction industry in South Africa. Procedia Manuf; 4, 10–16.

Tofighi M., Tirgari B., Fooladvandi M., Rasouli, F. & Jalali, M. (2020). Relation between EI and organizational citizenship behaviour in critical and emergency nurses in south east of Iran. Ethiopian Journal of Health Sciences, 25(1), 79-88.

Vashisht A., & Luxmi A., (2019). Impact of EI on organization citizenship behaviour: A study among nurses of government and private hospitals in and around Chandigarh. Amity Journal of Training and Development; 2 (1), 1-18.

Vila-Vázquez G., Castro-Casal C., Álvarez-Pérez D., & Río-Araújo D. (2018). Promoting the sustainability of organizations: Contribution of transformational leadership to job engagement. Sustainability; 10(11), 4109. doi: https:// doi. org/10.3390/su10114109.

Wu C., Wang F., Zou P.X.W., & Fang D. (2019). How safety leadership works among owners, contractors and subcontractors in construction projects. Int. J. Proj. Manag; 34, 789–805.