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Emotional Intelligence and Compassion Fatigue in Nurses: Mediating Role of Ego Resilience

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Abstract

The previous studies documented that nurses are at most risk population for work related stress. Therefore, the objectives of current study were to examine the connection between emotional intelligence, ego resilience and compassion fatigue in nurses. A cross-sectional research design was adopted to recruit 120 female nurses purposively. The standardized assessment tools used in this study were Emotional Intelligence scale (EIS), Ego Resiliency scale (ERS) and Professional Quality of Life (ProQOL) scale. The statistical software employed to analyze all the collected data was SPSS version 26 and Hayes Macro Process version 4.0. Results demonstrated significant positive association of emotional intelligence with ego resilience (r =.32, p<0.001) and compassion satisfaction (r =.25, p<0.001). Similarly, emotional intelligence was positively predicting compassion satisfaction (β =.18, p<0.05) and significantly negatively predicting burnout (β= -.20, p<0.05) and secondary traumatic stress (β= -.27.18, p<0.001). Mediation analysis indicates that ego resilience (β =.10, LL=.03, UL =.18) was mediating a relationship between emotional intelligence and compassion satisfaction in nurses. All findings are discussed along with relevant literature.

Key Words: Compassion Fatigue, Ego Resilience, Emotional Intelligence, Nurses

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Introduction

Challenges such as restricted time, expectations of patients, and less social support results in work-related stress among healthcare professionals (CDC, 2023). Healthcare professionals reported severe stress related to their profession after exposure to the ill people (Sinclair et al., 2017). Nurses are among the most at-risk populations for work-related stress (Duarte & Pinto-Gouveia, 2016) and their outcomes may include emotional burnout, lacking personal accomplishments and job satisfaction, reduced physical functioning and increased rate of staff turnover (Van Mol et al., 2018). Therefore, this study intended to find out the protective factors that buffer work-related stress in emergency services providers.

Emotional intelligence is an evolving tool advantageous to enhance the self-efficacy of nurses. Besides other factors such as empathy and supervisor support in patient care training, emotional intelligence isa linked with work performance (Geun et al., 2019). Nurses should cultivate emotional intelligence skills according to the new challenges in healthcare to boost up their level of performance (Alonazi, 2020). Nurses who are less emotionally intelligent often have low performance and inadequate skills to deal with work pressure. Emotional intelligence skills allow healthcare

professionals to foster interpersonal and emotional potentials serving as vital tool to deal with workplace challenges (Rosaria et al., 2019).

Ego-resiliency is an individual's potential to alter the level of control resulted from individual-environment interactions (Block & Kremen, 1996). Individuals having high ego-control are correlated with high impulse expression threshold and internalization of problems such as anxiety and depression (Vanderbleek & Gilbet, 2018). Less ego control manifest itself through externalization of problems and is linked with low impulse expression threshold (Letzring et al, 2005). The general ability of an individual to adapt himself or herself to both external and internal stressors in a more satisfactory manner, enabling an individual to maintain a balance interaction between excessive impulsivity and emotional rigidity.

Compassion fatigue is defined as "the response of healthcare providers to stress (Cohen et al., 2012) which subsequently affect their capabilities of nurturing" (Joinson, 1992). Literature documented the administration of Professional Quality of Life Scale to assess compassion fatigue (Stamm, 2010). This assessment tool is comprised of three sub-scales such as compassions satisfaction, burnout and secondary traumatic stress.

Compassion satisfaction is one of the compassion fatigue components standing for pleasure received from others while they are recovering from trauma (Sacco et al., 2015). Such type of pleasure and satisfaction protect nurses from the detrimental effects of compassion fatigue (Stamm, 2010). Compassion satisfaction provides strengths to nurses to engage in providing services instead of elevated stress level, patients with poor prognosis and dangerous working contexts, ultimately reducing and preventing burnout (Higgins et al., 2020).

Burnout is a psychological syndrome manifested because of interpersonal stressors such as lack of efficacy, exhaustion and cynicism (Leiter & Maslach, 2009). Professional Quality of life paradigm speculates that burnout of nurses is impacted by factors both at environmental and individual level (Stamm, 2010). Nurses in trauma wards are more likely to experience burnout (Cook et al., 2021). Secondary traumatic stress is demarcated as a stress resulted from secondary exposure of an individual to a high traumatic or stressful event in working environment (Morrison & Joy, 2016). Secondary traumatic stress is more prevalent in nurses which affects compassion fatigue (Kellogg et al., 2018). The poor psychophysical well-being of nurses is an indication of manifestation of secondary traumatic stress and burnout (Stamm, 2005). The estimated prevalence of job-related stress reported in health care providers ranging from 48.4–55% (Tsegaw et al., 2022). More than three-fourth population of nurses are at risk for compassion fatigue (Oktay & Ozturk, 2022) which may negatively impact their performance, physical and psychological health and accelerate their turnover rate (Drury et al., 2014). Based on the aforementioned literature, this study aims to determine that whether there is a relationship between emotional intelligence, ego resilience, compassion satisfaction, burnout and secondary traumatic stress in nurses; emotional intelligence and ego resilience predict compassion satisfaction, burnout and secondary traumatic stress in nurses and to determine that ego resilience mediates a relationship between emotional intelligence and compassion satisfaction in nurses.

Hypotheses of the Study

H1. Emotional intelligence is more likely to have a relationship with ego resilience, compassion satisfaction, burnout and secondary traumatic stress in nurses.

H2. Emotional intelligence and ego resilience are more likely to predict compassion satisfaction, burnout and secondary traumatic stress in nurses.

H3. Ego resilience is more likely to mediate the association between emotional intelligence and compassion satisfaction.

Method

Research Design

A cross-sectional research design was implemented to recruit 120 female nurses purposively. This study is cross-sectional in nature because of recruitment of different participants based on their demographics at a single point in time. The pre-study sample size calculated for this study was 57, taking into account two-tailed effect size of 0.50, 0.01 type II error and 0.95 power and was slightly flattened to enhance the accuracy of research findings. This study inclusion criteria includes nurses having an age range of 25-40 years, and at least 2 years professional experience in emergency care units, while the exclusion criteria include male emergency care providers working in private or family clinics, and mobile emergency care services such as Edhi ambulance service.

Instruments

The survey booklet comprised of informed consent, demographics and standardized assessment tool followed by debrief form. The demographics section include age, socioeconomic status, marital status, family income, type of jobs, and working hours.

Emotional Intelligence Scale (EIS)

The EIS Urdu version (Wong & Law, 2002) was used in this study to assess emotional intelligence in the recruited participants. EIS comprises of 16 items having 7-points Likert response format extending from 1= strongly agree to, 7= strongly disagree, having a reliability index of 0.80 to 0.87. The scale items are summated to generate a total score where high score shows high emotional intelligence. The reliability index of EIS in current study was .78.

Ego Resiliency Scale (ERS)

The ego resiliency scale, Urdu version was implemented to measure ego resiliency in recruited participants (Alessandri et al., 2008). ERS comprised of 10-items having 7-point Likert response format choices from 1= does not apply at all, to 7=Apply very strongly, having a reliability index of .71 to .73. This scale is scored up by simply summing up all the responses, where high score indicates greater ego resiliency. The reliability index of ERS in current study was 0.93.

Professional Quality of Life Scale (ProQOL)

ProQOL, Urdu version was administered to measure compassion satisfaction and fatigue in the enlisted sample (Stamm, 2008). This assessment tool is comprised of 30 items having a Likert response option ranging from 1=strongly agree to 5=strongly disagree. The reliability index of the original version ranges from .75 to .88. ProQOL is scored up into three sub-scales such as compassion satisfaction, burnout and secondary traumatic stress. The reliability index of ProQOL reported in current study was 0.79.

Procedure

After approval from Organizational Research, Innovation and Commercialization Committee (ORICC) of Kinnaird College for Women Lahore, the permission of utilizing assessment tools were obtained from their respective authors. The researcher approached Mayo hospital, General hospital, Chaudhry Muhammad Akram Teaching and Research Hospital located in Lahore city to recruit the potential participants. After granting approval of data collection from the aforementioned hospitals, the researcher recruited each participant after obtaining an informed consent. All participants were made aware about their right of withdrawal from the current study at any stage. The identity of

all participants was made anonymous by assigning specific numbers to each survey booklet in order to keep their privacy and confidentiality of information intact. The survey booklet was provided to each participant to record their responses in 20-25 minutes. All questionnaires were carefully screened to detect any missing item. Questionnaires who having incomplete responses from participants were excluded.

Statistical Analysis

All the collected data were statistically analyzed in SPSS version 26 and Hayes Macro Process version 4.0. The main statistical tools employed in this study were descriptive statistics, Pearson product moment correlation, Multiple regression analysis and mediation analysis. Descriptive statistics was used to draw a general picture of participant's demographics. Pearson product moment correlation was carried out to examine the association between emotional intelligence, ego resilience and compassion fatigue in nurses. Multiple regression analysis was used to determine that whether emotional intelligence and ego resilience predict compassion fatigue. Similarly, mediation analysis was utilized to assess that whether ego resilience mediated the connection between emotional intelligence and compassion fatigue.

Results

Table 1 indicates the descriptive statistics of the recruited participants in the current study. The mean age of participant was calculated as (M= 30.13, SD=3.49), along with their working hours (M=1.50, SD=0.50). Majority of participants were belonging to Islamic religion, with nuclear family system and middle socioeconomic status. More than half of the participants were married, having government job and about 1 lakh monthly family income.

Table 1

Descriptive Statistics of Participant's Demographics (N=120)

Demographic Variables	**F**	**%**	***M***	***SD***
Age (Years)			30.13	3.49
Working Hours			1.50	0.50
Religion				
Islam	106	88.3		
Christianity	13	10.8		
Other	1	08		
Family System				
Nuclear	62	51.7		
Joint	58	48.3		
Socioeconomic Status				
Lower class	12	10		
Middle class	107	89.2		
Upper class	1	.8		
Marital Status				
Unmarried	23	19.2		
Married	90	75		
Divorced	6	5.0		
Widowed	1	1.8		
Job Type				
Government	96	80		

Private	24	20
Family Income/Month		
<50k	10	8.3
50 thousand	35	29.2
1 Lakh	74	61.7
>1 Lakh	1	.8

Table 2

Pearson Correlation between Emotional intelligence, Ego Resilience and Compassion Fatigue in Nurses (N=120)

Variables	***M***	***SD***	**1**	**2**	**3**	**4**	**5**
1.Emotional Intelligence	77.65	12.96	_				
2.Ego Resiliency	36.87	14.77	.32***	_			
3.Compassion Satisfaction	27.76	5.47	.25***	.26***	_		
4.Burnout	25.89	3.30	-.26***	-.24***	-.01	_	
5.Secondary Traumatic stress	36.35	8.32	-.23*	-.14	.77**	.09	_

Note. M= mean, SD= Standard Deviation

*p<.05. **p<.01, ***p<.001

Table 2 indicates bivariate analysis to determine the relationship between emotional intelligence, ego resilience and compassion fatigue. Results revealed that Emotional intelligence was significantly positively linked to ego resiliency and compassion satisfaction and significantly negatively linked to burnout and secondary traumatic stress. Similarly, ego resilience was significantly positively correlated to compassion satisfaction while significantly negatively associated to burnout in nurses.

Table 3

Multiple Linear Regression analysis of Emotional Intelligence, Ego resilience and Compassion Fatigue (N=120)

	Compassion Satisfaction					**Burnout**					**Secondary Traumatic Stress**				
Variables	***B***	***SE***	***β***	***t***	***p***	***B***	***SE***	***β***	***t***	***p***	***B***	***SE***	***β***	***t***	***p***
EI	.07	.04	.18	2.00	.04	-.08	.03	-.20	-2.21	.02	-.23	.07	-.27	-2.94	.00
ER	.08	.03	.19	2.08	.03	-.06	.03	-.17	-1.85	.07	.05	.07	.07	.78	.43
R^2		.09					.09					.06			
F (df)	6.22(2,117)					6.18(2,117)					4.34(2,117)				
P	0.003					0.003					0.015				

Note: EI= Emotional Intelligence, ER= Ego Resilience

Table 3 indicates multiple linear regression analysis of emotional intelligence, ego resilience and compassion fatigue in nurses. Results indicated that both emotional intelligence (β= .18, p<0.05) and ego resilience (β= .19, p<0.05) were significantly positively predicting compassion satisfaction. Similarly, emotional intelligence was negatively predicting both burnout (β= -.20, p<0.05) and secondary traumatic stress (β= -.27, p<0.01) in nurses.

Table 4

Mediation analysis of Emotional intelligence, ego resilience and compassion satisfaction (N=120)

		Consequent						
		Ego Resilience (M)				Compassion Satisfaction (Y)		
Antecedent		*β*	*SE*	*P*		*β*	*SE*	*P*
Emotional Intelligence (X)	*a*	.35	.04	.000***	c'	.07	.03	.03*
Ego Resilience (M)					*b*	.07	.05	.00**
Constant	*i*	26.61	1.61	.000***	*i*	13.81	2.00	.00***
R^2= .06				R^2= .55				
F (1,118) =20.34, p=.000***						F (2,117) =212.47 *p*=.000***		

Note. ***p<.001,* p>.05

Table 4 indicates a mediation analysis with 1000 bootstrapped samples. Findings indicates that the direct effect of emotional intelligence on ego resilience was significant (*β* =.07, *p*=<0.05). Similarly, the indirect effects of emotional intelligence on compassion satisfaction through ego resilience (LL=.00, UL= .13) was also significant (Table 5). Mediation analysis indicates that nurses indicating high emotional intelligence were more likely to have increased ego resilience and through ego resilience, more likely to experience compassion satisfaction.

Table 5

Indirect Effects of Emotional Intelligence on Compassion satisfaction through ego resilience (N=120)

Variables	**β**	**SE**	**LL**	**UL**
Ego Resilience	.06	0.02	.00	.13

Discussion

The current study focused on investigating the association between emotional intelligence, ego resilience and compassion fatigue in nurses. Bivariate analysis indicated that emotional intelligence was significantly related to ego resilience, supported by the findings of the previous studies (Collado-Soler et al., 2023; Yoo & Park, 2015). Since high emotional intelligent people have an increased self-efficacy to tackle the adverse life experiences indicating its close association with ego resilience (Campbell-Sills & Stein, 2007; Fiorili et al., 2020). Emotional intelligence aids in maintenance of optimism, facilitating interpretation of other's emotions, subsequently predicting ego resilience (Droppert et al., 2019; Schneider et al., 2013). Therefore, it could be assumed that level of emotional intelligence impacts ego resilience in nurses.

Pearson product moment correlation analysis indicated that emotional intelligence was significantly correlated to compassion satisfaction, supported by the findings of the previous study (Mailett & Read, 2024). The quality nursing care includes human relationships and emotions (Dugué et al., 2021). Therefore, emotional intelligence is considered as vital skill required for nurses to implement effective interventions and deliver compassionate care to patients (Castelino & Mendonca, 2021; Lu & Shorey, 2021). Abundant research studies

suggests that nurses having appropriate level of emotional intelligence achieve greater patient's satisfaction and their health related outcomes as well as capable of fulfilling demands of work (Gelkop et al., 2022).

Emotional intelligence was significantly negatively linked to burnout, reinforcing findings of previous literature (Almeneessier & Azer, 2023; Yao et al., 2024). Since, management and the regulation of emotion is one of the most critical aspects of emotional intelligence. The regulation of emotion promotes resilience and adaptive coping mechanisms to tackle adverse life events. Studies found that emotion regulation was positively linked with resilience among traumatic individuals (Hegney et al., 2014). Similarly, emotion regulation was positively correlated with adaptive coping strategies in maltreated adolescents. Furthermore, study also documented negative association between emotion regulation, compassion fatigue and burnout (Li et al., 2022).

Ego resilience was significantly associated to compassion satisfaction while significantly negatively connected to burnout, in line with the study findings (Liu et al., 2024). According to Masten (2001), resilience is an individual's positive psychological resource to adapt well during adversities, tragedies, traumas, threat or any other difficult experiences. Nurses having strong ego resilience can restore their psychological state after their empathic and emotional investment while providing emergency services decrease the chances of compassion fatigue. Ego resilience mitigates the wear and tears of high demandedness jobs and the unhealthy behaviors of nurses (Masten, 2001).

Emotional intelligence was significantly predicting compassion satisfaction, burnout and secondary traumatic stress, supported by the findings of the study (Amir et al., 2019). High emotionally intelligent people tend to be more assertive, utilizing their social support networks, adequate problem-solving skills, good adaptability and less anxiety (Poret et al., 2010). Individuals with high emotional intelligence have less chances of suffering from their work-related problems as compare to less emotionally intelligent people who burdened themselves from work-related stress. Less emotionally intelligent people often involved in unhealthy behaviors such as smoking, drinking alcohol and blaming others for their errors (Poret et al, 2010).

Multiple linear regression analysis revealed that ego resilience was significantly predicting compassion satisfaction, in line with the findings of the study (Stanley & Sebastine, 2024). This could be explained by the fact that nurses having high level of ego resilience handles the emotional and physical demands of their roles in more balanced way by maintaining more positive outlook in challenging circumstances. Such resilience facilitates them in staying engaged and finding fulfillment in emergency services subsequently leads to increased compassion s kiatisfaction. Resilient nurses experiencing an increased sense of reward and meaningfulness in delivering emergency services which also improve their professional well-being and satisfaction.

Mediation analysis indicated that ego resilience significantly mediated the association between emotional intelligence and compassion satisfaction. High emotional intelligent nurses are better equipped to identify and respond to a patient's emotional needs. Ego resilience allow these interactions with determination and flexibility despite uncomfortable work settings and sufferings of patients. Such type of emotional awareness is transformed to more adaptive coping mechanisms by ego resilience, to prevent burnout and enhance compassion satisfaction. Therefore, ego resilience works as a mediating factor between emotional intelligence and compassion satisfaction.

This demonstrates the usage of emotional intelligence not as a tool for effective intervention between nurses and patients but also increasing their ability to seek out compassion satisfaction in their role.

Strengths and Limitations

The current research study highlights the positive association between emotional intelligence and compassion fatigue in nurses. Furthermore, emotional intelligence and ego resilience predicts compassion fatigue. However, the relationship between emotional intelligence and compassion satisfaction was significantly mediated by ego resilience in nurses.

The primary limitation includes cross-sectional research design which does not guarantee cause-and-effect relationships. Secondly, nurses who were providing services in rural areas of Lahore were not included in our study sample. This means that for nurses as a whole, the level of compassion fatigue reported in this study is probably underestimated. Thirdly, because the study was carried out in Lahore, Pakistan, therefore, findings must be applied with great care to other geographical areas with distinct socioeconomic and cultural backgrounds.

Future Suggestions

Future studies may employ a longitudinal research design to investigate the causal association between emotional intelligence, ego resilience, and compassion fatigue in nurses. They may adopt experimental designs to study the effects of emotional intelligence interventions on ego resilience and compassion fatigue in nurses. Scholars in future may investigate the protective effects of emotional intelligence and ego resilience on compassion fatigue in addition to other variables such as social support. Research studies must study these variables in other contexts such as schools, hospices, universities etc. to broaden the understanding of emotional intelligence, ego resilience and compassion fatigue.

Conclusion

Nurses are considered as one of the most vulnerable populations for work-related stress. Therefore, the current study explored the protective factors that could buffer their work-related stress. Emotional intelligence was negatively predicting both burnout and secondary traumatic stress while positively predicting compassion satisfaction as measure by ProQOL. Similarly, ego resilience was positively predicting compassion satisfaction. However, the link between emotional intelligence and compassion satisfaction was mediated by ego resilience. Interventions focused on inculcating and building emotional intelligence in nurses may help in reduction and effective management of work-related stress causing compassion fatigue.

Contribution of Authors

Tehreem Sajid: Conceptualization, Investigation, Methodology, Data Curation, Formal Analysis, Writing – Original Draft

Afsheen Gul: Methodology, Writing - Reviewing & Editing, Supervision

Rubab Razzaq: Methodology, Formal Analysis, Writing - Reviewing & Editing

Conflict of Interest

There is no conflict of interest declared by the authors.

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Data Availability Statement

The datasets of the current study are not available publicly due to ethical reasons but are available from the corresponding author [T.S.] upon the reasonable request.

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