From Empathy to Well-Being: How Emotional Intelligence Shapes Physicians' Mental Health via Job Satisfaction

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Abstract

Emotional intelligence and psychological well-being have emerged as critical factors in healthcare research, particularly for physicians who face intense stress, emotional exhaustion, and burnout. As emotional intelligence plays a vital role in enabling medical professionals to manage occupational challenges effectively, promoting their psychological well-being is increasingly recognized as essential. This study investigates how specific dimensions of emotional intelligence influence the psychological well-being of physicians, while also examining the mediating effect of job satisfaction on these relationships. A structured survey was administered to 352 physicians from various regions of West Bengal and Tamil Nadu. Data were analyzed using Structural Equation Modeling (SEM). The results demonstrate that emotional intelligence dimensions significantly impact both job satisfaction and psychological well-being. Furthermore, job satisfaction was found to partially mediate the relationship between emotional intelligence and psychological well-being, suggesting its pivotal role in enhancing mental health outcomes among physicians.

Keywords: Emotional Intelligence, Psychological Well-Being, Job Satisfaction, Physicians, Healthcare Workforce, Structural Equation Modeling (SEM), Occupational Stress

Introduction

According to Borooah, 2020[4], Renukappa, Mudiyia, Suresh, Abdalla, & Subbarao; 2022[42], and Mehra & Mishra, 2021[35], health care service delivery is the most challenging public service (Borooah, 2020[4], Renukappa, Mudiyia, Suresh, Abdalla, & Subbarao; 2022[42], In the process of providing health care services, physicians play a crucial role. They experience burn out, anxiety, massive amount of stress, and mental fatigue in pursuit of their duties (Nastasa & Farcas, 2015; Nooryan, Gasparyan, Sharif & Zoladl, 2012 [38]). For doctors, emotional intelligence is a very important skill. It reduces stress related mental illness, anxiety and job burnout (Shahid, Stirling & Adamas, 2018 [50]; Nooryan, et al., 2012; Weng, 2008).

In Indian health care context, plethora of diseases, scarcity of organizational resources, acute shortage of physicians, pressing demand of health care services, need for low-cost services, mushrooming of private sector healthcare providers, concern for privacy and patient safety, lower skill level contribute to the unfavorable working conditions for the physicians (Renukappa et al., 2022; Ramani & Mavalnkar, 2005; Khan & Banerji, 2014; [4]Borooah, 2020). The outbreak of covid-19 has put tremendous strains on the physicians, both at mental and physical level (Coyle, Ghazi & Georglou, 2021). As a result, doctors' levels of job satisfaction have plummeted. Several studies have investigated job satisfaction of the physicians, which is pre-requisite to a sound healthcare system (Deng, Yang, Li, Wang, Yan, & Li, 2018; Dousin, Collins & Kler, 2019; Weng, Hung, Liu, Cheng, Yen, Chang, & Huang, 2011). The current health care models focus on ensuring job satisfaction of

the physicians, which is the stepping stone towards their psychological wellbeing (Weng et al., 2011; Shahid et al., 2018).

Moreover, healthcare industry has experienced a paradigm shift - from a doctor dominated era to patient-centric health regime (Weng et al., 2008; Weng et al., 2011; Singh & Dixit, 2020). This new health care paradigm which calls for error free health care service delivery, more patient safety, empathy, and effective patient-doctor relationship. To increase patient satisfaction and loyalty (Deng et al., 2018; Singh & Dixit, 2020; Weng et al., 2008), it is essential to guarantee high service quality. In order to strengthen relationships between doctors and patients, emphasis is placed on communication (Weng et al., 2008). The doctors are forced to adjust to the new health care system as a result of this paradigm shift. According to Weng et al. (2008), doctors' social skills are essential for success in this highly complex and rapidly changing health care industry. It is absolutely necessary for doctors to have a high level of emotional intelligence. In the aftermath of critical service encounters and interpersonal communications, it aids doctors in being aware of and in control of their own emotions (Coskun, Ulutas, Budakoglu, Ugurlu, & Ustu, 2018). Furthermore, in order to build a trusting relationship with their patients, doctors must be aware of their patients' emotional state (Shahid et al., 2018; Nooryan et al., 2012). According to research, doctors' mental health is necessary for providing error-free health care services. The physiological health of physicians has a direct impact on the quality of patient care (Wallace, 2010). Although a number of studies deal with the emotional intelligence of the physicians (Shahid, et al., 2018; Nooryan, et al., 2012; Coskun et al., 2018; Weng et al., 2008; Lambert, Vanderbilt & Papadimos, 2019), a limited number of studies address emotional intelligence mental health link in health care context (Wallace, 2010; Coyle et al., 2021; Lin, Liebert, Tran, Lau & Salles, 2015; Lee, 2018). However, these studies fail to adequately investigate the role of emotional intelligence in enhancing physicians' mental health. Hardly any research study has examined the interrelationships among emotional intelligence, job satisfaction and psychological well-being in the context of health care. Our study attempts to offer an integrative perspective to emotional intelligence, job satisfaction and mental wellness of the doctors. The current study examines how job satisfaction and the psychological well-being of doctors are influenced by emotional intelligence dimensions. As a result, the study offers a blueprint for cultivating doctors' psychological well-being through job satisfaction and emotional intelligence.

Review of literature and hypotheses development

Emotional intelligence

Numerous public service settings have conducted extensive research on the emotional intelligence construct (Lee, 2018). Its definition is According to Salovey & Mayer (1990), "subset of social intelligence that involves the ability to monitor one's own and other people's feelings and emotions, to distinguish between them, and to use this information to guide one's thinking and actions." 189).

Wong and Law (2002) measured emotional intelligence in terms of three dimensions: "emotional self-awareness," "emotional other awareness," and "regulation of emotion," in accordance with this definition. Emotional self-awareness captures an individual’s ability to understand his or her own feelings or emotions and ability to capitalize on this emotional state to meet individual objectives (Lee, 2018; Guy & Lee, 2015). Being aware of the feelings and emotions of other people is the core of emotional other awareness (Lee, 2018; Wong & Law, 2002; Guy & Lee, 2015). According to Mayer & Salovey (1995), the core component of the emotional intelligence construct is emotional regulation. This dimension incorporates individual’s ability to adjust emotional reactions in a positive manner (Mayer & Salovey, 1995; Lee, 2018; Guy & Lee, 2015).

Job satisfaction

Researchers have defined job satisfaction in a variety of ways (Cranny, Smith, & Stone, 1992; Weiss, 2002; Filiz, 2014), and this construct has been studied in a number of occupational settings, including teaching (Filiz, 2014), sales (Churchill, Ford, Walker, 1974), financial service (Saura, Berenguer, Taulet & Velazquer, 2005), public service (Guy and Lee, 2015), and medicine (Weng et al. According to Loke (1976), "the positive emotional state caused by the assessment of one's job and job settings" is the definition of job satisfaction. According to Cranny et al. (1992), job satisfaction is "an individual's emotional response to job, emanating from the job holder's comparison of actual outcome and expected outcome." This definition is consistent with this definition. According to Filz (2014), Job satisfaction is “the positive mood caused by one’s experience with the job”. Weiss (2002) argued that job satisfaction is an attitude, and it is actually an “evaluative judgment” of job and job conditions. Like the definition of satisfaction, researchers can't quite agree on how to measure physicians' job satisfaction. Some researchers operationalized job satisfaction of physicians as multi-dimensional construct (Srivastava, Mishra and Madan, 2019), while other researchers put it as uni-dimensional (Umrani, Afsar, Khan & Ahmed, 2019; Weng et al., 2011).

Psychological Well-being

According to Ceri and Cicek (2020; Carmeli, Yitzhak-Halevy, and Weisberg, 2009), a growing body of research has provided ample insight into the psychological well-being construct across various occupational settings. There are two primary approaches to the concept of psychological well-being: "hedonic" (Diener, 1984) and "eudaimonic" (Ryff & Singer, 2008; Ryff, 1997). Hedonic approach conceives psychological well-being as the constellations of pleasurable feelings within the individual with respect to his or her life experiences. According to Diener (1984; Joshanloo, Capone, Petrillo, & Caso, 2017; Carmeli et al., 2009), subjective evaluations of self-chosen criteria that define quality of life are the source of these emotions. Psychological well-being, from the udaimonic point of view, is an "overall feeling of happiness" brought on by an individual's best performance in society (Ryff, 1995; Ryff & Singer, 1996). Ryff (2013) developed a six-factor model of psychological well-being based on this approach. This model examines an individual's positive feelings regarding self (self-acceptance), work (autonomy), personal growth (personal growth), environment (environmental mastery), positive relationships (positive relationships), and personal life (purpose in life) (Ryff, 2013; Ryff & Singer, 1996; Joshanloo et al., 2017). A constrained approach to psychological well-being was taken by some researchers (Ruderman et al., 2002; Carmeli et al., 2009), who examined this concept in terms of "life satisfaction," "self-esteem," and "self-acceptance." A tripartite model of psychological well-being with three dimensions—hedonic well-being, psychological well-being, and social well-being—was proposed by Joshanloo et al. (2017).

Emotional intelligence dimensions, job satisfaction and Psychological Well-being

The environment in which physicians work is complex and emotionally taxing. They grapple with emotional challenges triggered by – patient safety concern, medical errors, interpersonal conflict, ethical dilemma, and perceived apathy of fellow physicians (Heyhoe, Birkis, Harrison, O’Hara, Cracknell & Lawton, 2016; Mache, Vitzum , Nienhaus, Klapp & Groneberg, 2009). In order to provide high-quality medical care, doctors need to be aware of their own feelings (Heyhoe et al., 2016; Weng et al., 2008; Lambert et al., 2019). Emotional self-awareness of doctors fosters their clinical skills and professional care giving potentials (Coskun et al., 2018; Weng et al. 2008). Doctors with high emotional skills are less susceptible to medical errors (Borrell-Carrrio & Epstein, 2004). According to Weng et al. (2011), improved performance on the job gives doctors a sense of self-efficacy and personal accomplishments, which ultimately affects job satisfaction. According to the researchers (Lambert et al., 2019; Coskun et al., 2018; Weng et al., 2011; Shahid, et al., 2018), emotional self-awareness is essential for reducing physicians' job-related anxiety, stress, and burnout. According to Weng et al. (2011) and Renzi, Tabolli & Lanni & Pietro & Puddu (2005), burnout significantly reduces job satisfaction in the medical field. Recent research (Guy and Lee,

2015; Lee, 2018) has revealed a direct link between job satisfaction in the public sector and emotional self-awareness. According to Srivastava, Misra, Pathak, and Sharma (2021), physicians' levels of emotional self-awareness directly correlate with their level of job satisfaction. An individual's capacity to comprehend and evaluate the emotions of other people is included in the emotional other awareness dimension (Salovey & Mayer, 1990; Guy & Lee, 2015). The emotional state of their patients is better understood by doctors with high emotional awareness. As a result, when they treat their patients, they show more compassion, professionalism, and care. This type of emotional skill set is extremely important in developing effective doctor-patient relationships which impact on job satisfaction of the doctors (Weng et al., 2011). Guy and Lee (2015) investigated the link between emotional other awareness and job satisfaction nexus among public service professionals. According to Srivastava et al. (2021), doctors with a high level of other emotional awareness are more satisfied in their jobs. Several researchers (Cote & Morgan, 2002; Guleryuz, Gunney, Aydin & Asan, 2008) have highlighted the importance of regulation of emotion in the study of job satisfaction in service settings. According to Sharma and Srivastava (2019), "regulation of emotion" refers to an individual's capacity to readjust their emotional response to a situation that provokes emotion. According to Heyhoe et al. (2016) and Mache et al. (2009), the work that physicians do is emotionally taxing because they deal with situations that result in the death of patients and conflict within teams. According to Sharma & Srivastava (2019), doctors who are capable of emotional regulation are better equipped to deal with these challenging work environments. The researcher has investigated the connection between job satisfaction and emotional regulation in other occupational settings (Guleryuz et al., 2008). Prior studies on physicians and medical professionals revealed that regulation of emotion significantly predicts job satisfaction of physicians (Srivastava et al., 2021; Wang, Hu, Huang, Xie & Zhu, 2019).

In postulating psychological wellbeing, researchers consider “self-acceptance”, “personal growth”, and “positive relationships” as the key indicators of this construct (Ryff & Singer, 2008; Ryff, 1995). However, research studies (Ceri and Cicek, 2020; Coskun et al., 2018) suggest that stress and anxiety associated with the medical professions are detrimental to psychological well-being of doctors. According to Sharma, Dhar, and Tyagi (2015), emotional skills of medical professionals, such as the capacity to comprehend and evaluate one's own emotions, reduce stressors and aid in restoring psychological health. As a result, they perform better on the job, providing quality patient care (Coskun et al., 2018; Weng et al., 2008). Physicians are filled with the sense of personal growth and accomplishments, thanks to their job performance (Weng et al., 2011; Coskun et al., 2018). According to Sahid et al. (2018), Coskun et al. (2018), and Weng et al. (2011), the strength of physicians' relationships with patients and colleagues also has a significant impact on their well-being. According to Weng et al. (2008), the ability of doctors to psychologically assess the emotional state of others is essential for these kinds of interpersonal relationships. According to Kafetsios, Anagnostopoulos, Lempesis, & Valindra (2014), a physician's ability to regulate emotions strengthens the relationship between the doctor and the patient. Furthermore, according to Weng et al. (2011), a happy doctor-patient relationship is still the most important factor in patient satisfaction. According to Wang et al. (2019), two coping mechanisms that contribute to regulation of emotion—"emotional reappraisal" and "emotional suppression"—provide doctors with job satisfaction. Therefore, physicians' psychological well-being depends on their ability to regulate their emotions (Sharma & Srivastava, 2019; Simon & Durand-Bush, 2014). The occupational literature traces the connection between job satisfaction and psychological well-being (Zeng, Liu, Xie, Wu, Wang, & Lu, 2020). Studies reveal that conditions affecting job satisfaction are akin to prerequisites for psychological well-being in work settings. According to the majority of these studies, professional health care workers' psychological well-being depends on job satisfaction (Weng et al., 2011; Srivastava, Mishra, & Madan, 2019; Deng et al., 2018). Job satisfaction, garnered by anxiety, stress and burn out, are detrimental to psychological well-being of medical professionals (Srivastava et al., 2019; McLoughlin, Casey, Feeney, Weir, Abdalla & Barrett, 2021). According to

Ryff & Singer (1996), "overall feeling of happiness" refers to psychological well-being. Higher job satisfaction of physicians enhances the quality of treatment and patient care, improving overall job performance (Umrani, Afsar, Khan & Ahmed, 2019; Srivastava et al, 2019). It boosts the professional self-esteem of the doctors which add to their meaning of life, ensuring personal growth (Taubman-Ben-Ari & Weintroub, 2008). Doctors develop build sound patient relationships, providing patient satisfaction, which is highly associated job satisfaction of doctors (Weng et al., 2011). According to Deng et al. (2018) and Agarwal & Sharma (2011), doctors are more likely to be optimistic and positive when they have positive interpersonal relationships at work. According to existing research (Ryff, 1995; Ryff & Singer, 1996), "interpersonal relationships," "personal growth," and "meaning of life" are the key components of psychological well-being. Job satisfaction plays a mediating role in a variety of occupational settings, according to a growing body of occupational literature. Job performance (Devonish, 2016; Novarian & Ramli, 2020), organizational commitment (Aghdasi, Kiamanesh & Ebrahim, 2011), and turnover intentions (Wang, Lin, Chen, wang, Peters and Lin, 2023) are all mediated by job satisfaction, according to a number of empirical studies. According to existing research (Kamboj and Garg, 2021; Urquijo, Extremera, and Villa, 2015), "meaningfulness" and "perceived stress" function as meditating variables between emotional intelligence and psychological well-being. However, to the best of the authors' knowledge, there is no empirical evidence that job satisfaction mediates the relationships between psychological well-being and emotional intelligence dimensions. On the basis of above arguments, we posit that the following hypotheses:

Hypothesis 1: Regulation of emotion is directly associated with psychological well-being
Hypothesis 2: Emotional Self-awareness is associated with psychological well-being.
Hypothesis 3: Emotional other- awareness is directly associated with psychological well-being.
Hypothesis 4: Regulation of emotion is directly associated with job satisfaction.
Hypothesis 5: Emotional Self-awareness is associated with job satisfaction.
Hypothesis 6: Emotional other- awareness is directly associated with job satisfaction.
Hypothesis 7: Job satisfaction influences psychological well-being.
Hypothesis 8: Job satisfaction mediates the relationship between emotional self-awareness and psychological well-being.
Hypothesis 9: Job satisfaction mediates the relationship between emotional other awareness and psychological well-being.
Hypothesis 10: Job satisfaction mediates the relationship between regulation of emotion and psychological well-being.

Research Methodology

Research Design

The present study makes use of descriptive research design.

Independent Variables

The present study has three independent variables- emotional self-awareness, regulation of emotion and emotional other awareness

Dependent Variable

Psychological well-being is considered as the dependent variable of the study.

Mediating variable

Job satisfaction is considered as mediating variable of the study

Survey Instrument

Scales from Lee have been adapted to collect data on emotional intelligence dimensions like emotion regulation, emotional self-awareness, and emotional awareness of others. Lee (2018) used scales to measure job satisfaction, and Pradhan and Hati used a scale to measure psychological well-being (2019). The survey's responses were collected using five-point Likert scales.

Sampling Technique and Sample

Through the convenience sampling method, primary data were gathered from a few government and private hospitals located in various parts of West Bengal and Tamilnadu. There are 352 people in the study's sample size.

Statistical Tools Used

Exploratory Factor Analysis and Confirmatory Factor Analysis have been utilized for the evaluation of the measurement model. In the AMOS 20 version, the structural equation modelling technique was utilized for the purpose of testing hypotheses.

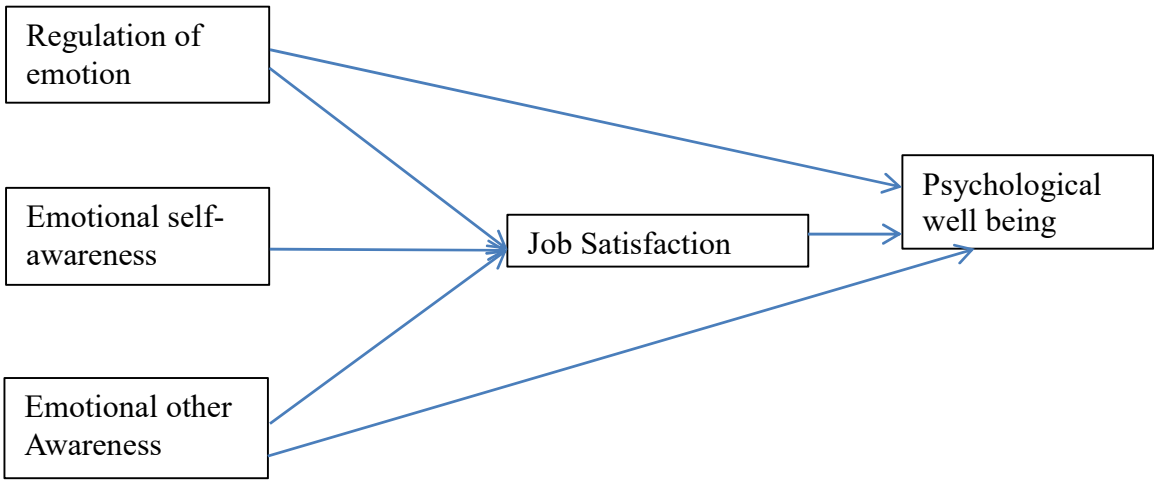

Figure 1: Hypothesized research model

Table 1: Descriptive of Demographic factors

	Variables	Frequency	Percentage
Gender	Male	203	57.6
	Female	149	42.4
Marital status	Married	189	53.7
	Unmarried	163	46.3
Age	21-30	149	42.3
	31-41	94	26.7
	41-51	48	13.6
	51-61	61	17.3
	MBBS	154	46.6

	MD/MS	188	53.4

Source: Author's survey

Results and Analyses

Common Method bias check

Given that our data came from the same respondents, there was a possibility of common method bias (Podaskoff, MacKenzie, Lee, & Podaskoff, 2003). We used the confirmatory common latent factor (CLF) approach to address common method bias. The common variance of all model-observed variables was computed in this method. All observed variables in our measurement model were linked to a new latent factor that we added to AMOS. Standardised regression weight differences between the two models (with and without the CLF) were determined. The findings revealed insignificant variations (less than two across all dimensions). Therefore, we reached the conclusion that data set used for analysis were free from common method bias (Podaskoff, et al., 2003)

Measurement Model analysis

We adopted exploratory and confirmatory factor analysis approach to assess the measurement model of the study. The entire data set was scanned for missing data prior to performing the aforementioned analyses. First, exploratory factor analysis was performed to examine all the items and constructs used in this work. Items on the scale with cross loadings and communalities of less than 0.5 were eliminated. AMOS 20 was used to conduct confirmatory factor analysis (CFA) to assess the validity and reliability of the study's measures. Because of their low standardised factor loadings, some scale items are removed. The model fit is evaluated using the adjusted goodness of fit index (AGFI), the comparative fit index (CFI), the root mean square residual (RMR), and the root-mean-square error of approximation index (RMSEA). According to Anderson and Gerbing (1988), comparative fit index (CFI) values should be greater than 0.90 for the desired model fit Adjusted goodness of fit index (AGFI). Model fit indices were chi-square (2)/degrees of freedom (df) = 2.065, TLI = 0.976, CFI = 0.997, GFI = 0.957, AGFI = 0.943, RMSEA = 0.014, and PCLOSE = 0.27 after scale items with standardised factor loadings were removed.

The reliability of all dimensions of emotional intelligence (emotional self-awareness, emotional other awareness and Regulation of emotion) and other constructs (job satisfaction and psychological well-being) was checked by computing Composite Reliability (CR). Hair, Ringle, and Sarstedt (2011) state that a CR value of 0.70 or higher provides sufficient evidence for the measures' internal consistency. All of the measures' CR values were greater than or equal to 0.743, as shown in Table 2. As can be seen in Table 2, the AVE (Average variance extracted) values for each and every construct were at or above the desired cut-off value of 0.50 (Hair et al., 2011). These findings suggested that convergent validity was strong. The Fornell-Larcker criterion was used to evaluate the constructs' discriminant validity. Each construct's square root of AVE was compared to the

construct-to-construct correlations. Across all constructs, the findings provided sufficient evidence for discriminant validity. As shown in the diagonal of table 3, the square roots of AVE for each construct are greater than their shared variances (Hair et al., 2011).

Table 2: Reliability and validity of the constructs

Construct	Item	Loadings	CR	AVE
Emotional Self-awareness(ESA)	I have a good sense of why I have certain feelings most of the time	0.868	0.761	0.731
	I have a good understanding of my own emotions	0.815		
	I really understand what I feel	0.795		
	I always know whether or not I am happy	0.936		
Emotional Other awareness(EOA)	I can always tell my friends' emotions from their behavio	0.893	0.773	0.747
	I am a good observer of others' emotions	0.918		
	I am sensitive to the feelings and emotions of others	0.81		
	I have a good understanding of the emotions of the people around me	0.832		
Regulation of emotion(REE)	I am able to control my temper and handle difficulties rationally	0.867	0.770	0.749
	I am quite capable of controlling my emotions	0.845		
	I can calm down quickly when I am very angry	0.913		
	I have good control of my own emotions	0.834		
Job satisfaction(JS)	My work is satisfying	0.851	0.743	0.717
	My job provides career development opportunities	0.823		
	There is substantial variety in the types of things I do	0.905		
	I continually learn new things in my position	0.804		
Psychological well-being(PWB)	I easily adapt to day-to-day changes of my life and manage my responsibilities well	0.879	0.757	0.743

	I care for things that are important to me, not what is important to others	0.893		
	I feel I am capable of decision-making	0.812		

Source: Authors

Table 3: Construct measurement assessment (discriminant validity)

Constructs	ESA	EOA	ROE	JS	PWB
Emotional Self awareness	**0.855**				
Emotional Other awareness	0.536	**0.864**			
Regulation of emotion	0.448	0.527	**0.865**		
Job satisfaction	0.404	0.504	0.481	**0.847**	
Psychological well-being	0.284	0.198	0.284	0.231	**0.862**

Source: Authors (Note: Fornell-Larcker criterion)

Alternative Model Testing

We have performed structural equation modelling (SEM) using AMOS 20 with maximum likelihood estimation. Two-stage analyses were used to test our hypotheses. We tested the effect of emotional intelligence constructs (emotional self-awareness, emotional self-regulation, and emotional awareness) on health care professionals' psychological well-being at stage one of the analysis. Our mediating variable, job satisfaction, was added to model 2. Two-stage analyses were used to see if the mediator's inclusion improved model fit indices and increased the proportion of variance that was explained by the dependent variable, psychological well-being. The 2 values, df, and model fit indices of each model—model one and model two—were examined for the purpose of model comparison. Model two stands out as the model that best fits the sample data, as shown in table 4. Model two reports $\chi 2$ value of 243.23 which is lesser than $\chi 2$ value of Model1 ($\chi 2$= 251.52), thereby suggesting an improvement in model fit. Moreover, Model two explained 33.23 percent of the total variance of Psychological well-being, whereas model one explains 21.12 percent of psychological well-being. Other model fit indices have seen values rise, as shown in table 4.

Table 4: Comparison of Alternative Structural Models

Model	$\chi 2$	df	$\Delta\chi 2$	RMR	RMSEA	CFI
1	251.52	184	-	0.024	0.03	0.976
2	243.23	183	-8.29	0.021	0.02	0.983

Source: Authors

Table 5: Model 1: SEM without mediator

Relationships	Estimates	Conclusion
REE→PWB	0.204*	Supported

ESA→PWB	0.223**	Supported
EOA→PWB	0.15*	Supported

*p value <.05; Source: authors

Based on previous research findings (Carmeli, Yitzhak-Halevy, & Weisberg, 2009), model one entails comprehending the direct impact of emotional intelligence on psychological well-being. PWB was significantly correlated with REE (path coefficient = 0.204; p 0.01) at stage one. PWB was significantly affected by ESA (path coefficient = 0.223; p 0.01). PWB was significantly influenced by EOA (path coefficient = 0.15; p 0.05). As shown in table 5, these results led to the acceptance of H1, H2, and H3. In the second stage of our analysis, we included job satisfaction as a mediating variable in our structural model. REE (path coefficient = 0.458; p 0.01), ESA (path coefficient = 0.531; p 0.01), and EOA (path coefficient = 0.231; p 0.05) had a significant effect on JS, as revealed by our analysis. As a result, the fourth hypothesis (REE JS), the fifth hypothesis (ESA JS), and the sixth hypothesis (EOA JS) were accepted (see table six). The path analysis revealed a significant relationship between JS (job satisfaction) and PWB (path coefficient = 0.65; p 0.01), which led to the acceptance of hypotheses seven (H7). The relationships between regulation of emotion (REE), emotional self-awareness (ESA), and emotional other awareness (EOA), as well as psychological well-being (PWB), were examined simultaneously. The mediating effect of job satisfaction was also examined. We used the bootstrapping method (5000 iterations) at 95% bias-corrected intervals to investigate the mediating effect (Preacher and Hayes, 2008). On AMOS, "user generated estimand" values for indirect effect were calculated using Visual Basic during bootstrap analysis.

Table 6: (Model 2) SEM with the mediator

Relationships	Estimates	Diagnostics
REE→JS	0.458**	CMIN/DF= 1.065, RMR= 0.021, GFI= 0.9570;CFI=0.997, RMSEA=0.014
ESA→JS	0.531**	
EOA→JS	0.231**	
JS→PWB	0.652***	
REE→PWB	0.410**	
ESA→PWB	0.228**	
EOA→PWB	0.196**	

***<.01; **<.005; Source: Authors

The significant indirect effect of REE on PWB through the mediator, job satisfaction (JS), is shown in table seven. The indirect effect of ESA on PWB through JS is 0.346, which is statistically significant at the 5% level. Table seven also reports significant indirect effect of EOA (0.151) on PWB. At stage two of our analysis, the direct effects of REE (0.41), ESA (0.228) and EOA (0.196) on PWB remain significant with the presence of mediator. Based on direct effects, we came to the conclusion that JS partially mediated the relationships between the dependent variables (REE, ESA, and EOA) and the independent variable (PWB), which led us to make the decisions regarding hypotheses 8, 9, and 10.

Table 7: Bootstrap analysis and statistical significance of direct and indirect effects

Relationships	Direct effect	Indirect effect	Confidence interval Low High	p value	Conclusion

REE→JS →PWB	0.41	0.299	0.201 0.384	<0.01	Partial mediation
ESA→JS →PWB	0.228	0.346	0.242 0.425	<0.01	Partial Mediation
EOA→JS →PWB	0.196	0.151	0.230 0.416	<0.05	Partial Mediation

Source: authors

Discussions

Emotional intelligence constructs and psychological well-being were found to have significant relationships in previous studies (Carmeli et al., 2009; Zeidner, Matthews, & Roberts, 2012). Montes-Berges & Augusto-Landa (2014) examined that emotional intelligence predicted psychological well-being of healthcare professionals. We found that emotional self-awareness, emotional other awareness and regulation of emotion significantly impacted psychological well-being of doctors. As a result, our study confirmed previous research's findings (Srivastava et al., 2021). Emotional intelligence and psychological well-being's causal relationship with health care settings was the focus of this new study. According to the findings of the current study, job satisfaction acted as a partial mediator between emotional intelligent constructs and psychological well-being. As a result, the research's conclusion helped advance the field of emotional intelligence literature. The structural model without the mediator explained 21.12 percent of the variance in the dependent variable, whereas our model with a mediator (job satisfaction) explained 33.23 percent of the variance in psychological well-being. With the presence of the mediator direct impacts of emotional self-awareness, emotional other awareness and regulation of emotion remain significant, confirming the partial mediation effect of Job satisfaction on emotional intelligence dimensions and psychological well-being relationships.

According to Anari (2012) and Weng et al. (2011), emotional intelligence remained a significant predictor of job satisfaction in various workplaces. According to Lee (2018), job satisfaction is a work-related attitude that is crucial to achieving positive behavioral outcomes in public service. According to Lee (2018), the degree to which various dimensions of emotional intelligence influence job satisfaction varies. According to Weng et al. (2011), doctors with higher emotional intelligence were more satisfied in their jobs. Srivastava et al. (2021) looked into how job satisfaction was directly related to emotional intelligence dimensions like emotional self-awareness, emotional awareness of others, and emotion regulation. In line with this study, our research showed that emotional self-awareness, regulation of emotion and emotional other awareness significantly influenced job satisfaction. Therefore, our study further validated the findings of prior research studies (Weng et al., 2011; Srivastava, et al., 2021; Lee, 2018).

Job satisfaction and psychological well-being were reported as outcome variables in health care settings (Chang and Nguyen, 2011). Job satisfaction is determinant of professional behaviour, which affects personal life of healthcare professionals (Weng et al., 2011). According to Umrani et al. (2019), job satisfaction aids physicians in overcoming occupational stress and burnout. Stress, burnout, work overload, and perceived organizational support are all contributing factors to physicians' poor mental health in the health care industry (Schneider, Talamonti, Gibson, and Forshaw; 2022). According to Gardiner, Sexton, Durbridge, and Garrard (2005), psychological well-being is crucial to the retention of medical professionals in their positions. It is essential to promote

psychological well-being in order to guarantee high-quality medical care (Wallace, 2012). Jones, Hill and Henn (2015) reported that job satisfaction influenced psychological well-being of individual employees. The current study hypothesized job satisfaction as a significant predictor of psychological well-being. We discovered that psychological well-being was significantly influenced by job satisfaction (path coefficient = 0.652, p 0.001). As a result, by reporting a causal relationship between job satisfaction and psychological well-being, our study adds new information to the health management literature.

Implication and conclusion

Emotional intelligence, job satisfaction, and psychological well-being—the three most important psychological and attitudinal variables in the health sector—are the focus of the current study. Using a structural equation modeling approach, this study investigates the impact of emotional intelligence dimensions on the psychological well-being of Indian physicians. Furthermore, this research work unfolds the impact of job satisfaction on psychological well-being of the physicians. Psychological well-being is found to be influenced by emotional intelligence dimensions like emotional self-awareness, emotion regulation, and emotional awareness of other emotions. It is interesting to note that possession of emotional intelligence leads to job satisfaction which contributes towards psychological well-being. Job satisfaction is also found to partially mediate the connection between psychological well-being and emotional intelligence. The psychological well-being of doctors may improve if training and intervention strategies can improve their emotional intelligence. It is important to note that doctor job satisfaction may increase if emotional intelligence can be improved. Emotional intelligence strengthens physicians' psychological well-being through job satisfaction, so this attitude on the job is extremely important in the health care industry. Not only does this study add to the existing body of knowledge on health care management, but it also provides a path forward for improving the well-being of medical professionals in the workplace. For the purpose of providing doctor and other health care professionals with employee training and development opportunities, hospitals would greatly benefit from this work.

Limitations and Future Direction

There are some limitations to this study. The study relies on a relatively small sample size, despite the authors' efforts to provide an in-depth analysis. This may pose a challenge to generalization of the findings of the study. The issues examined in this study might have been better understood by conducting a nationwide study. Cross-cultural studies can be conducted in the future to better investigate the variables. In addition, it is possible to investigate the hypothesized relationships presented in this research work by investigating the moderating effects of the demographic variables.

Conflict of interest

The authors declared no potential conflicts of interest with regard to the research, authorship and/or publication of this article

Funding

The authors receive no financial support for the research, authorship and/or publication of this article.

Reference

[1] M. Agarwal and A. Sharma, "Effects of hospital workplace factors on the psychological well-being and job satisfaction of health care employees," *J. Health Manage.*, vol. 13, no. 4, pp. 439–461, 2011.

[2] S. Aghdasi, A. R. Kiamanesh, and A. N. Ebrahim, "Emotional Intelligence and organizational commitment: testing the mediatory role of occupational stress and job satisfaction," *Procedia-Soc. Behav. Sci.*, vol. 29, pp. 1965–1976, 2011.

[3] N. N. Anari, "Teachers: emotional intelligence, job satisfaction, and organizational commitment," *J. Workplace Learn.*, vol. 24, no. 4, pp. 256–269, 2012.

[4] V. K. Borooah, "Issues in the Provision of Health Care in India: An Overview," *Arthaniti: J. Econ. Theory Pract.*, vol. 21, no. 1, pp. 43–64, 2022.

[5] F. Borrell-Carrió and R. M. Epstein, "Preventing errors in clinical practice: a call for self-awareness," *Ann. Fam. Med.*, vol. 2, no. 4, pp. 310–316, 2004.

[6] A. Carmeli, M. Yitzhak-Halevy, and J. Weisberg, "The relationship between emotional intelligence and psychological wellbeing," *J. Manag. Psychol.*, vol. 24, no. 1, pp. 66–78, 2009.

[7] V. Ceri and I. Cicek, "Psychological well-being, depression and stress during COVID-19 pandemic in Turkey: A comparative study of healthcare professionals and non-healthcare professionals," *Psychol. Health Med.*, vol. 26, no. 1, pp. 85–97, 2021.

[8] A. Chang and L. T. Nguyen, "The mediating effects of time structure on the relationships between time management behaviour, job satisfaction, and psychological well-being," *Aust. J. Psychol.*, vol. 63, no. 4, pp. 187–197, 2011.

[9] G. A. Churchill Jr., N. M. Ford, and O. C. Walker Jr., "Measuring the job satisfaction of industrial salesmen," *J. Market. Res.*, vol. 11, no. 3, pp. 254–260, 1974.

[10] O. Coskun, I. Ulutas, I. I. Budakoglu, M. Ugurlu, and Y. Ustu, "Emotional intelligence and leadership traits among family physicians," *Postgrad. Med.*, vol. 130, no. 7, pp. 644–649, 2018.

[11] S. Côté and L. M. Morgan, "A longitudinal analysis of the association between emotion regulation, job satisfaction, and intentions to quit," *J. Organ. Behav.*, vol. 23, no. 8, pp. 947–962, 2002.

[12] C. Coyle, H. Ghazi, and I. Georgiou, "The mental health and well-being benefits of exercise during the COVID-19 pandemic: a cross-sectional study of medical students and newly qualified doctors in the UK," *Ir. J. Med. Sci.*, vol. 190, pp. 925–926, 2021.

[13] C. J. Cranny, P. C. Smith, and E. Stone, *Job Satisfaction: How People Feel About Their Jobs*, Lexington, MA: Lexington Books, 1992.

[14] S. Deng et al., "Doctors' job satisfaction and its relationships with doctor-patient relationship and work-family conflict in China: a structural equation modeling," *INQUIRY*, vol. 55, 2018.

[15] D. Devonish, "Emotional intelligence and job performance: the role of psychological well-being," *Int. J. Workplace Health Manag.*, vol. 9, no. 4, pp. 428–442, 2016.

[16] E. Diener, "Subjective well-being," *Psychol. Bull.*, vol. 95, no. 3, pp. 542–575, 1984.

[17] O. Dousin, N. Collins, and B. K. Kler, "Work-life balance, employee job performance and satisfaction among doctors and nurses in Malaysia," *Int. J. Hum. Resour. Stud.*, vol. 9, no. 4, pp. 306–319, 2019.

[18] Z. Filiz, "An analysis of the levels of job satisfaction and life satisfaction of the academic staff," *Soc. Indic. Res.*, vol. 116, pp. 793–808, 2014.

[19] M. Gardiner, R. Sexton, M. Durbridge, and K. Garrard, "The role of psychological well-being in retaining rural general practitioners," *Aust. J. Rural Health*, vol. 13, no. 3, pp. 149–155, 2005.

[20] I. Gil Saura, G. Berenguer Contrí, A. Cervera Taulet, and B. Moliner Velázquez, "Relationships among customer orientation, service orientation and job satisfaction in financial services," *Int. J. Serv. Ind. Manag.*, vol. 16, no. 5, pp. 497–525, 2005.

[21] G. Güleryüz, S. Güney, E. M. Aydin, and O. Aşan, "The mediating effect of job satisfaction between emotional intelligence and organisational commitment of nurses: a questionnaire survey," *Int. J. Nurs. Stud.*, vol. 45, no. 11, pp. 1625–1635, Nov. 2008.

[22] M. E. Guy and H. J. Lee, "How emotional intelligence mediates emotional labor in public service jobs," *Rev. Public Pers. Admin.*, vol. 35, no. 3, pp. 261–277, 2015.

[23] J. F. Hair, C. M. Ringle, and M. Sarstedt, "PLS-SEM: Indeed a silver bullet," *J. Mark. Theory Pract.*, vol. 19, no. 2, pp. 139–152, 2011.

[24] J. Heyhoe et al., "The role of emotion in patient safety: Are we brave enough to scratch beneath the surface?" *J. R. Soc. Med.*, vol. 109, no. 2, pp. 52–58, 2016.

[25] M. Joshanloo, V. Capone, G. Petrillo, and D. Caso, "Discriminant validity of hedonic, social, and psychological well-being in two Italian samples," *Pers. Individ. Differ.*, vol. 109, pp. 23–27, 2017.

[26] K. Kafetsios, F. Anagnostopoulos, E. Lempesis, and A. Valindra, "Doctors' emotion regulation and patient satisfaction: A social-functional perspective," *Health Commun.*, vol. 29, no. 2, pp. 205–214, 2014.

[27] K. P. Kamboj and P. Garg, "Teachers' psychological well-being: role of emotional intelligence and resilient character traits," *Int. J. Educ. Manag.*, vol. 35, no. 4, pp. 768–788, 2021.

[28] M. I. Khan and A. Banerji, "Health Care Management in India: some issues and challenges," *J. Health Manage.*, vol. 16, no. 1, pp. 133–147, 2014.

[29] J. A. Lambert, A. A. Vanderbilt, and T. J. Papadimos, "Improved emotional intelligence in perioperative care through simulation-based medical education," *Adv. Med. Educ. Pract.*, vol. 10, pp. 39–42, 2019.

[30] H. J. Lee, "How emotional intelligence relates to job satisfaction and burnout in public service jobs," *Int. Rev. Admin. Sci.*, vol. 84, no. 4, pp. 729–745, 2018.

[31] D. T. Lin, C. A. Liebert, J. Tran, J. N. Lau, and A. Salles, "Emotional intelligence as a predictor of resident well-being," *J. Am. Coll. Surg.*, vol. 223, no. 2, pp. 352–358, 2016.

[32] E. A. Locke, "The nature and causes of job satisfaction," in *Handbook of Industrial and Organizational Psychology*, M. D. Dunnette, Ed., Chicago, IL: Rand McNally, 1976, pp. 1297–1343.

[33] S. Mache, K. Vitzthum, A. Nienhaus, B. F. Klapp, and D. A. Groneberg, "Physicians' working conditions and job satisfaction: Does hospital ownership in Germany make a difference?" *BMC Health Serv. Res.*, vol. 9, p. 148, 2009.

[34] C. McLoughlin et al., "Burnout, work satisfaction, and well-being among non-consultant psychiatrists in Ireland," *Acad. Psychiatry*, vol. 45, pp. 322–328, 2021.

[35] P. Mehra and A. Mishra, "Role of Communication, Influence, and Satisfaction in Patient Recommendations of a Physician," *Vikalpa*, vol. 46, no. 2, pp. 99–111, 2021.

[36] B. Montes-Berges and J. M. Augusto-Landa, "Emotional intelligence and affective intensity as life satisfaction and psychological well-being predictors on nursing professionals," *J. Prof. Nurs.*, vol. 30, no. 1, pp. 80–88, 2014.

[37] L. E. Năstasă and A. D. Fărcaş, "The effect of emotional intelligence on burnout in healthcare professionals," *Procedia-Soc. Behav. Sci.*, vol. 187, pp. 78–82, 2015.

[38] K. Nooryan, K. Gasparyan, F. Sharif, and M. Zoladl, "Controlling anxiety in physicians and nurses working in intensive care units using emotional intelligence items as an anxiety management tool in Iran," *Int. J. Gen. Med.*, vol. 5, pp. 5–10, 2012.

[39] P. M. Podsakoff, S. B. MacKenzie, J. Y. Lee, and N. P. Podsakoff, "Common method biases in behavioral research: a critical review of the literature and recommended remedies," *J. Appl. Psychol.*, vol. 88, no. 5, pp. 879–903, 2003.

[40] R. K. Pradhan and L. Hati, "The measurement of employee well-being: development and validation of a scale," *Glob. Bus. Rev.*, vol. 23, no. 2, pp. 385–407, 2022.

[41] K. V. Ramani and D. Mavalankar, "Health system in India: opportunities and challenges for improvements," *J. Health Organ. Manag.*, vol. 20, no. 6, pp. 560–572, 2006.

[42] S. Renukappa, P. Mudiyia, S. Suresh, W. Abdalla, and C. Subbarao, "Evaluation of challenges for adoption of smart healthcare strategies," *Smart Health*, art. no. 100330, 2022.

[43] C. Renzi, S. Tabolli, A. Ianni, C. Di Pietro, and P. Puddu, "Burnout and job satisfaction comparing healthcare staff of a dermatological hospital and a general hospital," *J. Eur. Acad. Dermatol. Venereol.*, vol. 19, no. 2, pp. 153–157, 2005.

[44] C. D. Ryff, "Psychological well-being in adult life," *Curr. Dir. Psychol. Sci.*, vol. 4, no. 4, pp. 99–104, 1995.

[45] C. D. Ryff, "Psychological well-being revisited: Advances in the science and practice of eudaimonia," *Psychother. Psychosom.*, vol. 83, no. 1, pp. 10–28, 2013.

[46] C. D. Ryff and B. Singer, "Psychological well-being: Meaning, measurement, and implications for psychotherapy research," *Psychother. Psychosom.*, vol. 65, no. 1, pp. 14–23, 1996.

[47] C. D. Ryff and B. H. Singer, "Know thyself and become what you are: A eudaimonic approach to psychological well-being," *J. Happiness Stud.*, vol. 9, pp. 13–39, 2008.

[48] P. Salovey and J. D. Mayer, "Emotional intelligence," *Imag. Cogn. Pers.*, vol. 9, no. 3, pp. 185–211, 1990.

[49] J. Schneider, D. Talamonti, B. Gibson, and M. Forshaw, "Factors mediating the psychological well-being of healthcare workers responding to global pandemics: A systematic review," *J. Health Psychol.*, vol. 27, no. 8, pp. 1875–1896, 2022.

[50] R. Shahid, J. Stirling, and W. Adams, "Promoting wellness and stress management in residents through emotional intelligence training," *Adv. Med. Educ. Pract.*, pp. 681–686, 2018.

[51] J. Sharma, R. L. Dhar, and A. Tyagi, "Stress as a mediator between work–family conflict and psychological health among the nursing staff: Moderating role of emotional intelligence," *Appl. Nurs. Res.*, vol. 30, pp. 268–275, 2016.

[52] P. Sharma and U. R. Srivastava, "Emotion Regulation and Job Satisfaction as Predictors of Subjective Well-being in Doctors," *Manag. Labour Stud.*, vol. 45, no. 1, pp. 7–14, 2020.

[53] C. R. Simon and N. Durand-Bush, "Differences in psychological and affective well-being between physicians and resident physicians: Does high and low self-regulation capacity matter?" *Psychol. Well-Being*, vol. 4, pp. 1–19, 2014.

[54] D. Singh and K. Dixit, "Measuring Perceived Service Quality in Healthcare Setting in Developing Countries: A Review for Enhancing Managerial Decision-making," *J. Health Manage.*, vol. 22, no. 3, pp. 472–489, 2020.

[55] S. Srivastava, R. Misra, and P. Madan, "'The saviors are also humans': understanding the role of quality of work life on job burnout and job satisfaction relationship of Indian doctors," *J. Health Manage.*, vol. 21, no. 2, pp. 210–229, 2019.

[56] S. Srivastava, R. Misra, D. Pathak, and P. Sharma, "Boosting job satisfaction through emotional intelligence: a study on health care professionals," *J. Health Manage.*, vol. 23, no. 3, pp. 414–424, 2021.

[57] O. Taubman–Ben-Ari and A. Weintroub, "Meaning in life and personal growth among pediatric physicians and nurses," *Death Stud.*, vol. 32, no. 7, pp. 621–645, 2008.

[58] W. A. Umrani, B. Afsar, M. Khan, and U. Ahmed, "Addressing the issue of job performance among hospital physicians in Pakistan: The role of job security, organizational support, and job satisfaction," *J. Appl. Biobehav. Res.*, vol. 24, no. 3, p. e12169, 2019.

[59] I. Urquijo, N. Extremera, and A. Villa, "Emotional intelligence, life satisfaction, and psychological well-being in graduates: The mediating effect of perceived stress," *Appl. Res. Qual. Life*, vol. 11, pp. 1241–1252, 2016.

[60] J. E. Wallace, "Mental health and stigma in the medical profession," *Health*, vol. 16, no. 1, pp. 3–18, 2012.

[61] C. Y. Wang et al., "Mediating effect of job performance between emotional intelligence and turnover intentions among hospital nurses during the COVID-19 pandemic: A path analysis," *Collegian*, vol. 30, no. 2, pp. 247–253, 2023.

[62] M. Wang, C. Hu, M. Huang, Y. Xie, and W. Zhu, "The effect of emotional clarity and attention to emotion on job satisfaction: A mediating role of emotion regulation among Chinese medical staff," *Asian J. Soc. Psychol.*, vol. 22, no. 3, pp. 316–324, 2019.

[63] H. M. Weiss, "Deconstructing job satisfaction: Separating evaluations, beliefs and affective experiences," *Hum. Resour. Manag. Rev.*, vol. 12, no. 2, pp. 173–194, 2002.

[64] H. C. Weng, "Does the physician's emotional intelligence matter?: Impacts of the physician's emotional intelligence on the trust, patient-physician relationship, and satisfaction," *Health Care Manag. Rev.*, vol. 33, no. 4, pp. 280–288, 2008.

[65] H. C. Weng et al., "Associations between emotional intelligence and doctor burnout, job satisfaction and patient satisfaction," *Med. Educ.*, vol. 45, no. 8, pp. 835–842, 2011.

[66] C. S. Wong and K. S. Law, "Wong and Law Emotional Intelligence Scale," *Leadersh. Q.*, [Online]. Available: https://doi.org/10.1016/S1048-9843(01)00095-1

[67] Z. Zeidner, G. Matthews, and R. D. Roberts, *What We Know About Emotional Intelligence: How It Affects Learning, Work, Relationships, and Our Mental Health*. Cambridge, MA: MIT Press, 2012.

[68] Z. Zeng, J. Liu, Q. Xie, Y. Wu, H. Wang, and L. Lu, "A national cross-sectional survey on work environment associated with psychological well-being and job satisfaction among Chinese employees," *Asia Pac. J. Public Health*, vol. 32, no. 4, pp. 201–208, 2020.