

Trait Emotional Intelligence and Its Correlates with the Level of Burnout Syndrome among First-year Resident Physicians in Oman

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Abstract

Background:

Existing literature is replete of the magnitude of occupational burnout among physicians and the role of emotional intelligence in moderating poor coping among physicians. However, these domains have not been explored in physicians in the Arabian Gulf countries. The study aims to quantify the rate of the presence of occupational burnout and trait emotional intelligence, the relationship between trait emotional intelligence and domains of occupational burnout, and demographic factors associated with occupational burnout.

Methods:

This was a cross-sectional, observational study conducted between June to August 2018 among first-year residents in Oman. The outcome measure included indices of composite and subscale (emotional exhaustion-EE, depersonalization -DP and personal accomplishment -PA) of *Abbreviated Maslach Burnout Inventory (aMBI)* and a composite score of *Trait Emotional Intelligence Questionnaire (TEI)* and its subscales (Self-control, Sociability, and Emotionality).

Results:

The overall rate of high burnout was 25.8%, with 57.5% residents reporting high levels of EE, 50.8% high DP, and 49.2% reporting a low sense of PA. Age was significantly associated with DP and PA ($P < 0.003$) and ($P < 0.0001$) respectively. Marital status was the only variable associated with EE ($p = 0.001$). EE was significantly lower in single residents compared with married ($P = 0.001$). The global mean (\pm SD) of the TEI was 4.77. A statistically significant relationship was between PA and EI ($r = 0.203$, $P = 0.026$). The role of age and marital status were also significant.

Conclusion:

Among first-year medical trainees in Oman, the prevalence of burnout was 25.8%. This collaborates the trend in the existing literature that occupational burnout is common among tomorrow's doctors. From this cross-cultural population, TEI did not impact the variation in aMBI, therefore, suggesting orthogonality of such domains.

Introduction

Occupational burnout equated to stress and its physical, emotional, and psychological ill-effect has been recognized to negatively impact medical professionals ranging from nurses to physicians [1]. As a result, this has potentially compromised the required safety measures and high-quality care [2]. This phenomenon may also affect future doctors [3]. There is strong evidence to suggest that those who are likely to have burnout during their early stage of medical education are likely to persist with the ill-effect of occupational burnout throughout their medical career [4]. Furthermore, it is interesting to note that medical students are likely to experience a higher burnout rate when compared to the general population [5]. A recent systematic literature review and meta-analysis conducted by Erschens et al. [6] highlighted that 7.0% to 75.2% of medical trainees endorsed themselves to have been marked with burnout syndrome. The huge discrepancy within the prevalence of burnout may be explained by country-specific factors, applied instruments, and cutoff-criteria for burnout symptomatology [6,7].

Various studies aimed to investigate socio-demographic and risk factors associated with burnout among medical students. Understanding such factors has the potential to lay the groundwork for prevention and intervention. Rodrigues et al [8] conducted a systematic review and meta-analysis which synthesized literature dating back to March 2018 and studied 4,664 medical residents. The results suggest that there is a subspecialty specific tendency to report burnout syndrome. On the other hand, some studies have found that medics are not equally susceptible to burnout. Instead, socio-demographic factors such as age, experience, specialization, gender, and marital status influence the risk for burnout [9]. Despite strong evidence showing that socio-demographic factors play a role in burnout, there exists further evidence suggesting otherwise. A systematic review focusing on the burnout risk factors among European healthcare professionals [10] concluded that socio-demographic factors have little impact on burnout. Therefore, more studies are necessary to examine who is more susceptible to suffer from burnout syndrome among medics.

Amid the prevailing predicament of the medical profession, some initiatives have embarked to mitigate the rising tide of occupational burnout among the medical profession that is tailor-made to address individuals and organizations [2, 11]. Numerous interventions have been used to relieve burnout syndrome including a new-age technique that owes their origin to Eastern philosophy, the techniques that echo the 1960's 'potential movement' and some mixture of alternative and complementary medicine, and lifestyle changes [12-16]. According to existing meta-analyses and systematic reviews, there is no substantial evidence to conclude that attempted interventions are effective [2, 17]. Moreover, there are debates about whether a 'panacea' for burnout among medical professions will ever exist [18]. Within such a context, it is becoming increasingly clear the importance of exploring moderating and mediating variables as they are necessary to understand the trajectories of burnout. In support of such a view, several studies have highlighted that certain temperaments tend to strongly moderate and mediate the pathway for the development and outcome of burnout [19-21]. An example of such temperament is emotional intelligence. There is controversy on whether emotional intelligence is the ability or dispositional tendency [22]. On one hand, emotional intelligence as the ability has received wide attention in terms of how it correlates with wellbeing [23], and on the other hand, emotional intelligence as a dispositional tendency has received scant attention with a few exceptions [24-27]. More studies are therefore

required to explore how specifically dispositional tendency in emotional intelligence tends to strongly moderate and mediate trajectories of burnout [19-21].

With the aforementioned increasing rate of burnout and the moderating effect of emotional intelligence, this study aims to investigate the prevalence of occupational burnout and how emotional intelligence moderates the effect. The related aim is to explore the relationship between emotional intelligence and occupational burnout domains. Considering the existing research and previous studies, it is hypothesized that there is a correlation between occupational burnout and emotional intelligence. More specifically, a higher score on emotional intelligence correlates a lower score in occupational burnout. Finally, the study also includes an exploratory analysis and aims to explore how certain sociodemographic factors influence the prevalence of burnout syndrome.

Methods

Study design, Site, and Duration

This study was a cross-sectional/analytical study which was conducted between June and August 2018 among first-year residents, enrolled in the Oman Medical Specialty Board (OMSB) training programs. In Oman, physicians, upon completion of the internship, have the option to enroll in a 5-year residency program [24].

Setting

The participants were medical residents under the auspices of the Oman Medical Specialty Board (OMSB). OMSB is an independent, ACGME-accredited educational body located in Muscat, Oman. Further information on the residency program under OMSB has been detailed elsewhere [24]. The residency programs include medical subspecialties (e.g. anesthesia, dermatology, emergency medicine, internal medicine, radiology, psychiatry, and pediatrics), surgical subspecialties (e.g. E.N.T, General surgery, Ophthalmology, Oral and Maxillofacial Surgery, Obstetrics and gynecology, and orthopedic) and laboratory subspecialties (e.g. biochemistry, hematology, histopathology, and microbiology).

Data Collection and Sampling method

The participants were approached and recruited during a mandatory OMSB workshop and didactic teaching. To ensure the research sample is representative, a stratified random sampling procedure was adopted. Thus, participants were stratified according to the number of intake for each specialty ($\approx 65\%$ Medical, $\approx 20\%$ surgical, and $\approx 15\%$ laboratory). The algorithm for randomization software was employed to fulfill the objective of the study. Thereafter, deemed representative participants were contacted to explain the objective of the present study and obtain electronic consent for participation. The recruited participants were informed that their participation is completely anonymous and voluntary. They were also informed of their right to withdraw from the study at any time. In the event of refusal to participate, replacements were done via another bout of randomization.

Study proforma

The study proforma consisted of socio-demographic information, indices for soliciting trait emotional intelligence, and occupational burnout. Socio-demographic information included variables such as age, gender, and marital status. Socio-economic status was obtained by questioning the type of housing ('rented' vs 'owned') and perceived monthly income ('average income', 'high income'). The urban-rural dichotomy was defined by the participant's secondary school location ('urban', 'rural'). In Oman, all Omanis are entitled to free education from primary to secondary school under the government scheme of the Ministry of Education [28]. There are also private schools that offer bilingual educational stream. Therefore, participants were asked whether they attended government or private schools. Finally, they were asked to state their residency program ('medical', 'surgical', 'diagnostic'). The study proforma also contained self-related checklists for burnout and emotional intelligence as described below.

Occupational burnout

Occupational burnout was measured using *Abbreviated Maslach Burnout Inventory* (aMBI) which consists of 9-items. aMBI is publicly available (https://rmhgrandrounds.files.wordpress.com/2015/03/soim_abbreviated_maslach_burnout_inventory.pdf). The aMBI 7-point Likert type scale ('everyday' to 'never') is divided into three subscales – emotional exhaustion (EE), depersonalization (DP) personal accomplishment (PA). The aMBI is based on three factors previously established among physicians [29]. While higher scores of EE and DP indicate higher burnout, a higher score of PA denotes lower burnout. The aMBI has been adopted in different populations and its psychometric properties were found to be adequate [30,31]. Internal reliability scores of each subscale revealed the following Cronbach's alpha coefficients: EE ($\alpha = 0.74$), DP ($\alpha = 0.71$), PA ($\alpha = 0.72$). The composite score aMBI achieved overall adequate internal reliability ($\alpha = 0.81$). Overall burnout was taken as the sum of scores for each subscale. A score of 0-9 in the EE and DP subscales is categorized as no to low burnout, whereas a subscale score of 10–18 is regarded as moderate to severe burnout. On the other hand, a higher PA score (10-18) indicates lower burnout.

Trait Emotional Intelligence

The dispositional tendency for emotional intelligence was measured using the *Trait Emotional Intelligence Questionnaire-Short Form* (TEIQue-SF) [24], a 7-point Likert type scale ('strongly disagree' to 'strongly agree'). TEIQue-SF is a self-administered checklist with 4 subscales: *Sociability, Emotionality,*

Self-Control, and *Well-being*. TEIQue-SF consists of 30 items and scoring ranging from 30 to 210. A higher score implies higher emotional intelligence traits [24]. The reliability and validity of TEIQue-SF have been established among Omani residents in a previous study by Al Huseini et al. [24], the internal consistency reliabilities of the four factors were as follows; Cronbach $\alpha = 0.70$ for *Emotionality*, $\alpha = 0.8$ for *Self-control*, $\alpha = 0.78$ for *Well-being* and $\alpha = 0.75$ for *Sociability*.

Data analysis

Statistical Package for Social Sciences (SPSS, version 24.0 (IBM Corp., Armonk, NY) was utilized for statistical analysis. Categorical data (age and sex) were recapitulated counts and percentages. Mean and standard deviation (SD) were calculated for continuous variables. Pearson's correlation was used to tease out the link composite score of EI with the various burnout components (EE, DP, and PA). Fisher's exact test and the Likelihood Ratio Test were utilized to examine the association between socio-demographic variables and sub-scale of aMBI and its composite score. A multivariate binary logistic regression analysis was used to ascertain the independent predictors of overall burnout. A p-value of less than 0.05 was considered statistically significant.

Ethical Approval

Ethical approval was attained from the local IRB, Oman Medical Specialty Board Research, and the Ethics Committee of the College of Medicine and Health Sciences at Sultan Qaboos University, Muscat, Oman (MREC#1058). Participants were required to provide written informed consent before proceeding. Study procedures were carried out by the Code of Ethics of the World Medical Association (Declaration of Helsinki) for human experiments.

Results

Table 1 summarizes the demographic variables. One hundred and thirty residents dispensed with the study proforma, 122 returned the study proforma (response rate = 93.8%). Due to incompleteness, the final count was 120. Females constituted 76.7% (n = 92) of the study sample for which the majority were married. The majority of residents included in this study were married 57.5% (N=69). The mean age of the cohort was 27.03 ± 1.64 years. Most participants (84.2%) were living in their own homes, while 15.8% were in rented accommodation. The vast majority (85.8%) of the subjects reported average incomes.

Rate of trait emotional intelligence and occupational burnout

Table 2 shows mean (\pm SD) of the trait EI score by its factors are as follows for each subscale: 'Well-being = 5.15 (0.93), Self-control=4.47 (0.80) Emotionality=4.70 (0.79) and Sociability=4.71 (0.79). The global trait EI of all residents was 4.77 (0.64). The prevalence of Depersonalization (DP) among first-year residents in this study cross multiplicity was 50.8 % (n = 61) and 55% (n = 66) were found to be in high EE status, whereas 46.7% (n = 56) had a low sense of PA. The Overall burnout in this study was, 25.8% (n = 31).

The relationship between demographic factors associated with occupational burnout

Table 3 shows the Univariate analysis for subscale burnout association with socio-demographic factors. In the demographic variables, significant associations were found between Age and DP and PA subscales (p= 0.003) and (p= 0.0001). Marital status was the only variable associated with EE (p=0.001). EE was significantly lower in single residents (37.3%) compared with married (68.1%). None of the other categorical variables were significantly associated with EE, DP, and PA.

Relationship between domains of trait emotional intelligence and occupational burnout

The correlation between EI and its components with burnout components is shown in **Table 4**. A statistically significant positive correlation was found between PA and Well-being (r = 0.203, P = 0.026). Other variables such as Self-control, Sociability, and Emotionality did not show any significant correlation with personal accomplishment. We found no significant correlation between EI factors of well-being, self-control, emotionality and sociability and the other burnout dimensions.

Discussion

There is evidence suggesting that stress within medical organizations has led many of the workforces to report suffering from poor coping, also known as, a 'silent epidemic' [32]. Due to such tribulation, initiatives aimed at the individual, specific unit of medical subspecialty, and organizational levels have been carried, however, there are mixed outcomes. One of the empirical questions that arose is whether temperament intimately tied to those who pursue medical education might play a part in the prevailing predicament [33]. While occupational burnouts have been explored in the Arabian Gulf countries, there are limited studies that concurrently examine whether there is a trajectory of temperament to such misgiving. To fill the gap in the literature, this study has embarked to quantify how first-year residents endorse themselves in indices of occupational burnout and indices of

Emotional Intelligence. Therefore, this study aimed to explore how specific dimensions of emotional intelligence are related to burnout and whether certain socio-demographic characteristics are associated with burnout dimensions.

The present cohort consisted of first-year medical residents in Oman attached to Oman Medical Specialty Board which adhere to ACGME competencies which aim to mitigate physician burnout and heighten emotional intelligence [24]. Among 130 first-year residents who consented to participate, the majority (76.7%) are females. One of the outcomes of the present affluence and modernization in Oman triggered by the development of hydrocarbon is increased female empowerment and participation in the labor force. As a result, healthcare infrastructure in Oman is dominated by females [34]. Therefore, the gender distribution in this study echoes the effeminization of healthcare in Oman.

Studies have indicated that occupational burnout takes a toll on all strata of the medical profession and those who succumb to burnout in their medical education are likely to have poor coping after qualifying as physicians [4]. There is also evidence to suggest that occupational burnout tends to disproportionately affect resident physicians [5] and these have been attributed to the disturbance in sleep-wake cycles due to long shifts, stress of encountering life and death, managing those with life-limiting diseases, and the risks of committing a medical error and abuse by others [35]. This study suggests 25.8% of the participants were found to have a high burnout status. The present rate appears to be in the lower range in comparison to the global trend of prevalence ranging from 7.0% to 75.2% as mentioned above [6]. The factors that impacted burnout are emotional exhaustion and depersonalization. The personal accomplishment was least endorsed among the subscale of the aMBI. This finding supports previous studies which found that indices of emotional exhaustion and depersonalization in aMBI are defining features of occupational burnout [31,36].

Our study showed that the mean global trait EI of all residents was 4.77 (0.64). A result that is lower than the average score reported by Al Huseini et al. [24], as well as other studies [26,37]. Our study did not find any significant difference in trait EI and its subscales among residents in different specialties, age, and socioeconomic status, which is similar to findings in many international studies [37-40].

Dissecting correlates of occupational burnout has the potential to shed light on factors that could be used to prevent the prevailing high burnout among the medical profession. The data of the study demonstrate a significant positive correlation between personal achievement and wellbeing. In other words, participants who reported higher sense of personal achievement also reported increased wellbeing. However, there were no significant correlations between other indices of emotional intelligence and other subscales of occupational burnout. This partially supports the hypothesis of the study as there exists somewhat of a significant correlation between occupational burnout and emotional intelligence. This is suggestive of the impact of wellbeing on burnout which has been previously demonstrated in a study conducted by Nastasa and Farcas (55). Their findings also reveal that personal accomplishment is influenced by emotional intelligence. Trait emotional intelligence is characterized by self-efficacy which is very similar to personal achievement. Self-efficacy refers to an individual's self-belief in their ability to perform or achieve well. Therefore, individuals who are more likely to believe in themselves are also more likely to achieve a high sense of personal accomplishment. Nevertheless, it is important to highlight that a correlation does not imply cause and effect, therefore, it may be difficult to understand exactly which variable influences the other. Indices of occupational burnout, specifically personal accomplishment and depersonalization, are associated with empathy and issues pertinent to self-esteem respectively [41]. In a study from Kuwait, the results revealed that lack of empathy was common among medical trainees and this could be attributed to occupational burnout [42]. This is especially concerning when considering the outcomes or effects of occupational burnout which may compromise patient safety and quality of care. The question remaining is whether such dispositions are amenable or resistant to change because such disposition is intimately tied with the tendency to pursue a medical career [33]. More studies are therefore warranted.

Some covariates of burnout including age, experience, specialization, gender, and marital status have been suggested to play a role in the expression of occupational burnout [8, 9] but there is a dissenting view [10]. The findings demonstrate a significant correlation between age and specific subscales depersonalization and personal achievement. Furthermore, it is evident that older participants report higher rates of depersonalization and lower personal achievement which consequently leads to burnout. Similar findings were demonstrated in previous research which suggests that older professionals are likely to have more work experience which as a result increases the likelihood of experiencing occupational burnout [43]. However, other studies have found a bimodal relationship between age and burnout. In a study by Marchand [44], age was found to be positively correlated with burnout until the age of 30, negatively correlated up to the age of 55, and finally positively correlated above 55 years of age. This highlights a separate assumption and alternatively suggests that burnout syndrome is influenced by different life stages rather than age alone. Relevant to this present discussion on age, previous studies have suggested that occupational stress tends to have a commutative pattern. Thus, there is an incremental increase in stress as one progresses in the medical career [45]. This would imply that burnout is not a pre-existing disposition before entering medical school. Rather it is acquired during medical training. Studies in Oman did suggest that in comparison to other specialization in art and science subjects, medical students are more prone to experience poor coping [46]. In addition to age, this study suggests that marital status influences the endorsement of burnout. Moreover, married participants reported higher burnout syndrome, specifically emotional exhaustion. This could be explained by work-family conflicts, especially since the majority of the sample was female. It is important to note that for many years married women were deemed responsible for housekeeping and caregiving, which therefore might increase work-family conflicts and as a result impact burnout syndrome especially for women with highly demanding jobs. In other populations, as the present study, marital status is often an important covariate in the trajectory of burnout [8,9] and essential for work-life balance [47]. A study in Denizli, Turkey, suggested that married female doctors working in emergency units in Turkey constitute a high risk for poor coping [48]. In Omani society, traditional dictated gender segregation with women taking the role of homemaker [49]. However, emerging women empowerment most coming from education has resulted in women entering the modern economy but yet traditions still hold expectations for their role within motherhood. Such conflicting expectations are likely to render women in the labor force to

juggle between their newly acquired role as a doctor and traditional roles as housewives [50]. This background may explain why marriage may not be a protractive factor for female doctors in Oman as often reported in male doctors [51] but there are dissenting views [52].

The debate is persisting in the literature regarding how to come to grip with the prevailing occupational burnout among healthcare workers. The various initiative aimed at both individuals and medical infrastructure to reduce occupational burnout [2, 11] and indeed many programs have been implemented [12-16]. However, no conclusive evidence has been forthcoming regarding the efficacy of such initiative. Therefore, interest has emerged to shed light on the factors that moderate and mediate occupational burnout. One such moderating factor has been the role of emotional intelligence in terms of its ability or disposition [22]. To shed light on such complex issues and to lay the groundwork for further scrutiny, this study has embarked to examine whether there is a relationship between trait emotional intelligence and occupational burnout. The present study indicates a significant relationship between the scale that taps into personal accomplishment and trait-emotional intelligence. This domain relates to one's feeling of competence and achievement in his or her career. People with a lower sense of achievement tend to manifest burnout [53]. Since there is evidence to suggest personal accomplishment is predicted by satisfaction with the job [54], more studies, therefore, are warranted to examine how to 'clone' tomorrow's doctor who will have strong attributes that encompass high tendency for a sense of personal accomplishment. Further understanding of moderating factors to reduce occupational burnout among physicians is needed. Studies are needed to examine the top-down approach -structural or organizational strategies work in tandem to moderate burnout among physicians. Also, it remains to be seen how moderating factors such as traits intimately linked to emotional intelligence could be utilized as an individualistic approach to come to grip with occupational burnout. Some of the individual-focused approaches such as work-life balance, exercises, and incorporation of new 'age techniques' such as yoga, meditation, and autogenetic techniques have been shown to have heuristic values [11]. Implementing such interventions tailored for the trait emotional intelligence has the potential to improve healthcare outcomes as well as the wellbeing of tomorrow's doctors.

Limitation

As often is the case, psychosocial studies as this one tend to have various limitations because the investigated concepts lack the central features. Similarly, the validity of those concepts is not clear when used in different populations and linguistic groups. Secondly, the generalization of this study is likely to be hampered by the fact that it utilized a cross-sectional approach, which is often viewed to present suboptimal robustness in research. Future studies could utilize a more robust methodology. Thirdly, pre-existing emotional disorders and different personality types tend to shape one's reactivity to burnout and their subjectivity when expressing emotional intelligence which has not been accounted for in this study.

Conclusion

Among first-year resident physicians, the prevalence of burnout as quantified by the Abbreviated Maslach Burnout Inventory suggests approximately 26% of the sample reported burnout. In the analysis of each subscale of the *Abbreviated Maslach Burnout Inventory*, it was suggested that approximately 57% of them are experiencing burnout from emotional exhaustion and 51% from depersonalization. The domain for personal accomplishment was endorsed among approximately 49% of the physician resident. In terms of the contribution of covariates, age and marital status outshined the other socio-demographic factors. The entrance of age echoes other studies whereby burnout hinges for the extent of exposure to the medical culture. As the cohort is predominantly female, the present study suggests being married constitutes a risk factor for developing burnout. On the other hand, the purported link of trait emotional intelligence has been partially supported in this study. The subscale of wellbeing was highly endorsed and appeared to have a link to a subscale of Abbreviated Maslach Burnout Inventory, personal accomplishment. Hence, the take-home message is that married residents would require provision for work-life balance.

Abbreviations

ACGME: Accreditation Council For Graduate Medical Education

aMBI: Abbreviated Maslach Burnout Inventory

DP: depersonalization;

EE: emotional exhaustion

OMSB: Oman Medical Specialty Board

PA: personal accomplishment

SD: standard deviation

SPSS: Statistical Package for Social Sciences;

TEI: Trait Emotional Intelligence Questionnaire

Declarations

Ethics Approval and Consent to Participate: This study was approved by the Institutional Review Board ((MREC#1058). Participants were requested to provide written informed consent and the study was carried out per the Code of Ethics of the World Medical Association (Declaration of Helsinki) for human experiments.

Consent for Publication: Not applicable. However, consent for publication was obtained through ethics approval and consent to participate.

Availability of Data and Materials: This is a research article and all data generated or analyzed during this study are included in this published article.

Competing / Conflict of Interest: None. The authors declare that there are no conflicts of / or competing interests.

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Authors' Contributions: SH, MA, NB, MB, HM, NS, and HS designed the study, involved in data collection and SJ provided data analysis and statistical expertise. The initial draft of the manuscript was prepared by SH, RB, SA, and, and then circulated repeatedly among all authors for critical revision. SA contributed to conceptual work, framework, draft write-up, editing, and critical evaluation. All authors read and approved the final manuscript.

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Tables

Table 1. Socio-demographic characteristics residents (n=120) under Oman Medical Specialty Board from 17 different sub-specialties in Oman		
Variable		N (%)
Age	Mean±SD	27.03±1.639
Gender	Male	28 (23.3)
	Female	92 (76.7)
Marital status	Married	69 (57.5)
	Single	51 (42.5)
Family house	Rented	19 (15.8)
	Owned	101 (84.2)
Perceived income	Average income	104 (86.7)
	High income	16 (13.3)
Urban-rural dichotomy	urban	37 (30.8)
	rural	83 (69.2)
Type of school attended	Private	6 (5.0)
	Government	114 (95.0)
Residency program	Medical subspecialties	84 (70.0)
	Surgical subspecialties	26 (21.7)
	Diagnostic subspecialties	10 (8.3)

		Mean (sd)	Minimum	Maximum
Subscale of TEI	Well being	5.15 (0.93)	2.50	7.00
	Self-control	4.47 (0.80)	2.50	6.33
	Emotionality	4.70 (0.79)	2.25	6.63
	Sociability	4.71 (0.79)	3.00	6.83
	Overall	4.77 (0.64)	2.77	6.37
		Mean (sd)	N (%)	
Subscale aMBI	Emotional Exhaustion	3.53 (1.32)	66(55)	
	Depersonalization	3.34 (1.57)	61(50.8)	
	Personal Accomplishment	3.33 (1.31)	56 (46.6)	
	Overall	3.40 (0.84)	31(25.8)	

Variable		Emotional Exhaustion			Depersonalization			Personal Accomplishment		
		No to low burnout	Moderate to severe burnout	p value	No to low burnout	Moderate to severe burnout	p value	No to low burnout	Moderate to severe burnout	p value
		n (%)	n (%)		n (%)	n (%)		n (%)	n (%)	
Gender	Male	13 (46.4)	15 (53.6)	1.000	16 (57.1)	12 (42.9)	0.391	13 (46.4)	15 (53.6)	0.517
	Female	41 (44.6)	51 (55.4)		43 (46.7)	49 (53.3)		51 (55.4)	41 (44.6)	
	Age, mean±SD	26.74±1.57	27.27±1.67	0.077	26.59±1.46	27.46±1.70	0.003*	26.55±1.43	27.59±1.70	0.0001*
Marital status	Married	22 (31.9)	47 (68.1)	0.001*	32 (46.4)	37 (53.6)	0.580	35 (50.7)	34 (49.3)	0.580
	Single	32 (62.7)	19 (37.3)		27 (52.9)	24 (47.1)		29 (56.9)	22 (43.1)	
Housing	Rented	7 (36.8)	12 (63.2)	0.464	7 (36.8)	12 (63.2)	0.319	11 (57.9)	8 (42.1)	0.803
	Owned	47 (46.5)	54 (53.5)		52 (51.5)	49 (48.5)		53 (52.5)	48 (47.5)	
Perceived income	Average income	50 (48.1)	54 (51.9)	0.108	53 (51.0)	51 (49.0)	0.422	57 (54.8)	47 (45.2)	0.433
	High income	4 (25.0)	12 (75.0)		6 (37.5)	10 (62.5)		7 (43.8)	9 (56.3)	
Urban-Rural dichotomy	Urban	20 (54.1)	17 (45.9)	0.234	18 (48.6)	19 (51.4)	1.000	18 (48.6)	19 (51.4)	0.555
	Rural	34 (41.0)	49 (59.0)		41 (49.4)	42 (50.6)		46 (55.4)	37 (44.6)	
Type of school attended	Private	2 (33.3)	4 (66.7)	0.689	4 (66.7)	2 (33.3)	0.435	2 (33.3)	4 (66.7)	0.416
	Government	52 (45.6)	62 (54.4)		55 (48.2)	59 (51.8)		62 (54.4)	52 (45.6)	
Residency program	Medical	37 (44.0)	47 (56.0)	0.603	42 (50.0)	42 (50.0)	0.222	47 (56.0)	37 (44.0)	0.666
	Surgical	11 (42.3)	15 (57.7)		10 (38.5)	16 (61.5)		12 (46.2)	14 (53.8)	
	Diagnostic	6 (60.0)	4 (40.0)		7 (70.0)	3 (30.0)		5 (50.0)	5 (50.0)	
*Statistically significant, Test: Fisher's exact test, Likelihood ratio										

Table 4: Relationship between the subscale of Trait Emotional Intelligence (TEI) and burnout derived from Abbreviated Maslach Burnout Inventory (aMBI)

Global score of TEI	Emotional exhaustion		Depersonalization		Personal Accomplishment	
	Correlation 'r'	p-Value	Correlation 'r'	p-Value	Correlation 'r'	p-Value
Well-being	0.074	0.419	-0.150	0.103	0.203	0.026
Self-control	-0.012	0.900	0.067	0.466	0.022	0.808
Emotionality	0.086	0.350	0.051	0.585	-0.016	0.865
Sociability	0.121	0.187	0.022	0.814	0.156	0.089