

The Effect of Occupational Stress on Doctors' Quality of Life Mediated by Burnout

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Abstract

This Present study explores the impact of Occupational stress on doctor's quality of life, focusing on the mediating role of burnout. Healthcare professionals are usually exposed to elevated occupational stress from heavy workloads, long working hours, and emotionally demanding contacts with patients. These stressors have significantly contributed to burnout, described in terms of emotional exhaustion, depersonalisation, and decreased personal accomplishment. Thus, burnout could negatively influence the well-being and Quality of life of doctors.

A Cross Sectional research design survey was conducted to collect information from 150 doctors. The items were sampled purposively for this study . Standardized instruments like the Occupational Stress Index (OSI), Maslach Burnout Inventory (MBI), and WHOQOL-BREF for the measurement of quality of life were used for testing.

The Spearman rank-order correlation analysis revealed negative correlations between the dimensions of occupational stress and the dimensions of quality of life—physical, psychological, social, and environmental. This again emphasizes that higher occupational stress levels are found with poor quality of life among doctors. Results of mediation analyses Depersonalization and emotional exhaustion fully mediated occupational stress in its relation to many quality-of-life dimensions, suggesting that the negative impacts of occupational stress were largely channeled through these two components of burnout. It is different in the case of personal accomplishment, which partially mediated the relationship because its direct effect upon most dimensions of quality of life was also significant. These results point out the need to initiate interventions in efforts to reduce stress and prevent burnout in order to better the general well-being of healthcare providers.

Keywords: Doctors', Occupational Stress, Burnout, Quality of Life, Stress-Burnout Relationship, Psychological Well-Being

INTRODUCTION

Doctors play a major role for the good health and wellbeing of both individuals and communities. However, because of the demanding nature of their work, doctors themselves frequently experience high levels of burnout and occupational stress, which can have a detrimental effect on their quality of life. This study focuses on seeing the connection between doctors' quality of life, burnout, and occupational stress. There have been researches on Occupational stress among healthcare professionals, with more focus on nurses .This study focuses on Doctors as they are particularly vulnerable due to the high demands of their roles. Research indicates that the intense workload, long hours, and emotional toll of patient care

contribute significantly to stress levels (Xue et al., 2021). This stress often shows as burnout, which is further divided into emotional exhaustion, depersonalisation, and reduced personal accomplishment (Felton, 1998). Burnout, in turn, adversely affects both physical and mental well-being, leading to a diminished quality of life (Giorgi et al., 2017)

Burnout serves as a mediator between occupational stress and quality of life. Studies have consistently shown that burnout is linked to poor health outcomes, including musculoskeletal pain, gastrointestinal disorders, and chronic fatigue (Giorgi et al., 2017). These physical and psychological symptoms directly affect healthcare professionals' quality of life, impacting their ability to function properly. The relationship between burnout and quality of life is complex, with burnout acting as a psychological bridge between occupational stress and reduced well-being (Xue et al., 2021).

Research on the COVID-19 pandemic has further highlighted the vulnerability of healthcare professionals to burnout. Front-line workers, particularly doctors and nurses, experienced heightened levels of stress and burnout due to the emotional toll of patient care during the pandemic (Pappiya et al., 2023). These findings underscore the need for interventions that address the immediate stressors and the long-term impact of burnout on quality of life.

Grover et al. (2018) said that Burnout among healthcare professionals in India led to significant mental health issues such as depression, anxiety, and substance abuse. The study highlighted the importance of mental health programs to support professionals in managing stress and burnout, particularly during crises like the pandemic. Similarly, Sarafis et al. (2016) found that workplace conflicts, discrimination, and uncertainty regarding treatment as significant stressors for nurses, affecting their caring behaviors and quality of life.

While burnout mediates the relationship between stress and quality of life, individual differences such as coping mechanisms and support systems can moderate its impact (Isoard-Gauthier et al., 2019). For instance, recreational activities and self-care have been shown to mitigate the effects of burnout, leading to better health-related quality of life outcomes among healthcare workers (Wu et al., 2011). Moreover, organisational factors such as leadership support and adequate staffing are crucial in alleviating stress and preventing burnout (Jacobs, 2024).

In conclusion, the literature emphasizes the significant impact of occupational stress and burnout on the quality of life for healthcare professionals, particularly doctors. Burnout acts as a crucial mediator in this relationship, with factors such as emotional exhaustion, depersonalization, and reduced personal accomplishment leading to detrimental effects on health and well-being. Addressing burnout through individual and organisational interventions is essential for improving both the well-being of healthcare professionals and the quality of patient care

METHODS

Aim

Assessing the Effect of Occupational Stress on Doctors' Quality of Life Mediated by Burnout

Research questions

1. What are the key factors that influence the quality of life of Doctors'?
2. How can the relationship between occupational stress, burnout, and quality of life in Doctors' be identified and measured?
3. Does burnout mediate the relationship between occupational stress and the quality of life of Doctors'?

Research Objectives:

- Determine the correlation between occupational stress, burnout on quality of life experienced by Doctors'.
- Evaluate the different areas of burnout among Doctors'
- Determine if burnout is a mediation variable between Occupational stress and Quality of life.

Hypotheses

H01: There is no significant relationship between occupational stress and burnout levels and the quality of life of Doctors'

HA1: There is a significant negative relationship between occupational stress levels and the quality of life of Doctors'

Variables**Independent Variables: Occupational stress levels**

Work-related stress includes harmful physical and psychological reactions that employees experience due to job responsibilities, workplace conditions, or various stressors.

Mediating Variable: Burnout levels

Burnout is a state of emotional, physical, and mental exhaustion caused by sustained stress in the workplace that has not been properly managed. It often manifests as profound fatigue, a pessimistic or cynical attitude towards one's job, and a significant decline in work effectiveness.- Dependent Variable: Quality of life

Quality of Life (QoL) aims to assess the overall well-being of a person or a group by taking into account various positive and negative aspects that influence their lives at a specific point in time.

Research design

This present study used a cross-sectional survey design. Data was collected from participants, that are doctors using standardised questionnaires. The primary focus of the study will be to assess occupational stress, burnout, and quality of life among Doctors'.

Participants

The sample size was 150 participants, included doctors working in hospital settings. Participants will have varying levels of professional experience.

Sampling

Participants were chosen through the use of a Purposive Sampling technique. The goal of this approach was to target physicians who were actively working in hospital environments.

The Inclusion criteria :

- Participants must actively work in their respective roles during recruitment.
- Participants must have worked at the Hospital for at least three years.

The Exclusion criteria:

- Participants employed on a temporary or contractual basis are excluded.
- Individuals with above 35 years of work experience will be excluded.

Measures

Three standardised tools were employed in this study:

1. Occupational Stress Index (OSI)

The Occupational Stress Inventory (OSI), created by Srivastava and Singh, is made up of 46 questions divided into ten subcategories, including role overload, role ambiguity, and role conflict, among others.

Participants are asked to assess their stress levels using a five-point Likert scale, and the responses are then appropriately scored. The overall Cronbach's Alpha value reached 0.82.

2. WHOQOL-BREF

The World Health Organization gave the WHOQOL, a tool to measure quality of life across various subjective aspects. The shortened version, WHOQOL-BREF, available in 19 languages, is used worldwide for cross-cultural quality of life comparisons. The WHOQOL-BREF, recommended for use in time-constrained situations or to reduce respondent burden, includes 26 items across four domains: physical health, psychological health, social relationships, and environment, with two items on overall quality of life and general health. It uses a 5-point Likert scale and shows good internal consistency (Cronbach's alpha 0.91), and its domain scales show a significant correlation, supporting its validity. (Almarabheh et al., 2023).

3. Maslach Burnout Inventory (MBI)

The three main components of the Maslach Burnout Inventory (MBI), which is the most widely used tool for measuring burnout, are diminished personal accomplishment, depersonalization, and emotional weariness. The MBI, was created in the 1980s by Christina Maslach and Susan E. Jackson, a questionnaire to assess burnout in work-related stress. Respondents use a Likert scale to score their experiences, which include negative attitudes toward work, a sense of diminished professional efficacy, and emotional exhaustion. With Cronbach alpha ratings of 0.90 for emotional tiredness and 0.76 for both depersonalisation and decreased personal accomplishment, high MBI scores are indicative of higher levels of burnout.

Ethical Considerations

Ethical considerations are crucial in this study's execution to ensure each participant's safety and dignity. First, informed consent from all participants were taken after being fully told about the goals, methods, possible dangers, and advantages of the study. The ability to withdraw at any time without facing any repercussions made participation entirely voluntary. Confidentiality and anonymity was preserved. Prior to data collection, ethical approval was acquired from the institutional review board (IRB), following the guidelines to guarantee that participants' rights, dignity, and welfare were protected during the entire research procedure.

RESULTS

Table 1: Correlation Matrix for Occupational Stress, Quality of Life, and Burnout

		Occupational stress	Physical	Psychological	Social
Occupational stress	Spearman's rho	-			
	df	-			
	p-value	-			
Physical	Spearman's rho	-0.91	-		
	df	148	-		
	p-value	0.010	-		
Psychological	Spearman's rho	-0.225	0.666	-	
	df	148	148	-	
	p-value	0.003	1.000	-	

Social	Spearman's rho	-0.299	0.596	0.512	-
	df	148	148	148	-
	p-value	<.001	1.000	1.000	-
Environment	Spearman's rho	-0.329	0.738	0.723	0.647
	df	148	148	148	148
	p-value	.001	1.000	1.000	1.000

A Spearman's rank correlation study was done to investigate the link between occupational stress and various quality of life dimensions (Physical, Psychological, Social, and Environmental) among Doctors. The findings revealed significant negative correlations with physical quality of life ($\rho(148) = -0.191, p = 0.010$), indicating higher occupational stress is linked to lower physical wellbeing; psychological quality of life ($\rho(148) = -0.225, p = 0.003$), suggesting increased stress leads to diminished psychological health; social quality of life ($\rho(148) = -0.299, p < 0.001$), implying stress worsens social interactions and support; and environmental quality of life ($\rho(148) = -0.329, p < 0.001$), showing that rising stress correlates with a decline in environmental factors crucial to quality of life, such as safety, financial resources, and home environment.

Table 2 : Effect of Occupational Stress on Physical Quality of Life Mediated by Emotional Exhaustion

<i>Effect</i>	<i>Label</i>	<i>Estimate</i>	<i>SE</i>	<i>Z</i>	<i>p</i>	<i>%</i>
Indirect	<i>a*b</i>	-1.203	0.262	-4.59	<.001	72.0
Direct	<i>C</i>	0.468	0.352	1.33	0.183	28.0
Total	<i>c+a*b</i>	-0.735	0.305	0.016	0.016	100.0

The mediation analysis revealed that Emotional Exhaustion partially mediates the relationship between Occupational Stress (OS) and Physical Quality of Life (QOL). The indirect effect of OS on Physical QOL through Emotional Exhaustion was significant ($a * b = -1.203$), ($Z = -4.59$), ($p < .001$), accounting for 72.0% of the total effect, while the direct effect of OS on Physical QOL was not significant ($c = 0.468$), ($Z = 1.33$), ($p = .183$). These findings suggest that the impact of OS on Physical QOL is primarily mediated through Emotional Exhaustion, indicating a partial mediation effect.

Table 3: Effect of Occupation Stress on Psychological Quality of life Mediated by Emotional Exhaustion

Effect	Label	Estimate	SE	Z	p	%
Indirect	<i>a*b</i>	-0.8497	0.244	-3.481	<.001	92.56
Direct	<i>C</i>	-0.0683	0.405	-0.169	0.866	7.44
Total	<i>c+a*b</i>	0.9180	0.302	3.038	0.002	100.0

The mediation analysis revealed that Emotional Exhaustion fully mediates the relationship between Occupational Stress (OS) and Psychological Quality of Life (QOL). The indirect effect of OS on Psychological QOL through Emotional Exhaustion was significant ($a * b = -0.8497$), ($Z = -3.481$), ($p < .001$), accounting for 92.56% of the total effect, while the direct effect of OS on Psychological QOL was not significant ($c = -0.0683$), ($Z = -0.169$), ($p = .866$). These findings suggest that the impact of OS on

Psychological QOL is primarily channeled through its effect on Emotional Exhaustion, indicating a full mediation effect.

Table 4: Effect of Occupation Stress on Social Quality of life Mediated by Emotional Exhaustion

<i>Effect</i>	<i>Label</i>	<i>Estimate</i>	<i>SE</i>	<i>Z</i>	<i>p</i>	<i>%</i>
Indirect	<i>a*b</i>	-0.7503	0.168	-4.474	<.001	95.45
Direct	<i>C</i>	-0.0358	0.236	-0.152	0.879	4.55
Total	<i>c+a*b</i>	-0.7860	0.198	-3.975	<.001	100.0

The mediation analysis revealed that Emotional Exhaustion fully mediates the relationship between Occupational Stress (OS) and Social Quality of Life (QOL). The indirect effect of OS on Social QOL through Emotional Exhaustion was significant ($a * b = -0.7503$), ($Z = -4.474$), ($p < .001$), accounting for 95.45% of the total effect, while the direct effect of OS on Social QOL was not significant ($c = -0.0358$), ($Z = -0.152$), ($p = .879$). These findings suggest that the impact of OS on Social QOL is primarily mediated through Emotional Exhaustion, indicating a full mediation effect.

Table 5: Effect of Occupation Stress on Environmental Quality of life Mediated by Emotional Exhaustion

Effect	Label	Estimate	SE	Z	p	%
Indirect	$a*b$	-1.525	0.358	-4.254	<.001	76.2
Direct	<i>C</i>	-0.476	0.547	-0.869	0.385	23.8
Total	$c+a*b$	-2.001	0.459	-4.361	<.001	100.0

The mediation analysis revealed that Emotional Exhaustion partially mediates the relationship between Occupational Stress (OS) and Environmental Quality of Life (QOL). The indirect effect of OS on Environmental QOL through Emotional Exhaustion was significant ($a* b = -1.525$), ($Z = -4.254$), ($p < .001$), accounting for 76.2% of the total effect, while the direct effect of OS on Environmental QOL was not significant ($c = -0.476$), ($Z = -0.869$), ($p = .385$). These findings suggest that the impact of OS on Environmental QOL is primarily mediated through Emotional Exhaustion, indicating a partial mediation effect.

The indirect effects of OS on Physical, Psychological, Social, and Environmental QOL through Emotional Exhaustion were significant, while Direct effects were non-significant, confirming that Emotional Exhaustion primarily mediates the impact of OS on all QOL dimensions, indicating partial mediation for Physical and Environmental QOL and full mediation for Psychological and Social QOL.

Table 6: Effect of Occupation Stress on Physical Quality of life Mediated by Depersonalization

Effect	Label	Estimate	SE	Z	p	%
Indirect	$a*b$	-0.836	0.202	-4.129	<.001	89.2
Direct	<i>C</i>	0.101	0.101	0.317	0.752	10.8
Total	$c+a*b$	-0.735	-0.735	-2.550	0.011	100.0

The mediation analysis across physical, psychological, social, and environmental quality of life (QOL) revealed that depersonalisation fully mediates the relationship between occupational stress (OS) and all

QOL dimensions. The indirect effects of OS on physical, psychological, social, and environmental QOL through depersonalisation were significant, with standardised indirect effects ($a*b$) of -0.836, -0.626, -1.251, and -1.251, respectively, all $p < .001$. The direct effects of OS on each QOL dimension were non-significant, suggesting that depersonalization accounts for the majority of the impact of OS on QOL, demonstrating a full mediation effect.

The mediation analysis revealed that Personal Achievement does not significantly mediate the relationship between Occupational Stress (OS) and any Quality of Life (QOL) domains (Physical, Psychological, Social, and Environmental), with the indirect effects being non-significant in all cases. The impact of OS on QOL is primarily direct, with Personal Achievement providing only a minor and non-significant contribution as a mediator.

DISCUSSION

The negative correlation between occupational stress and physical quality of life suggests that Doctors' who experience high-stress levels have a lower Physical quality of life. This supports the idea that chronic exposure to stress can lead to physical exhaustion and illness, as evidenced by prior research (Giorgi et al., 2017).

Moreover, the Significant Negative correlation between occupational stress and psychological quality of life suggests that Doctors' mental well-being deteriorates with increased stress. This is in line with studies showing that stress contributes to psychological issues such as anxiety and depression, which, in turn, diminish overall well-being (Ye et al., 2014).

Similarly, the negative association between occupational stress and social quality of life indicates stress adversely impacts social interactions and support systems. High-stress levels may hinder maintaining positive social relationships, which is crucial for Doctors', as strong social support can buffer against stress (Pappiya et al., 2023).

Lastly, the highest negative correlation was observed between occupational stress and environmental quality of life. This suggests that stress significantly affects external factors, such as safety, financial resources, and living conditions. The influence of occupational stress on environmental QoL aligns with studies that underscore the holistic impact of stress on life circumstances beyond the workplace (Khamisa et al., 2015).

This study's findings indicate significant negative correlations between occupational stress and various dimensions of quality of life (QoL) among Doctors'. These results align with existing literature that highlights the adverse effects of stress on well-being in high-demand professions like healthcare (Xue et al., 2021; Babapour et al., 2022). Specifically, higher occupational stress was associated with lower scores in physical, psychological, social, and environmental quality of life. These findings matched previous studies showing a negative relationship between occupational stress and health .

Overall, these results show the importance of addressing occupational stress to improve Doctors' overall quality of life. The negative correlations supported the hypothesis that occupational stress detracts from well-being, possibly through mechanisms like burnout. Further research is warranted to explore the mediating role of burnout in this relationship, as suggested by previous studies (Isoard-Gauthier et al., 2019)

This Present study's findings provides nuanced understanding of the role of emotional exhaustion, depersonalisation, and personal achievement in mediating the relationship between occupational stress (OS) and quality of life (QOL) across its physical, psychological, social, and environmental dimensions.

Each mediator's impact varies, offering valuable insights into how occupational stress differentially affects various aspects of well-being.

Emotional exhaustion partially mediates the relationship between OS and both physical and environmental QOL while fully mediating the relationship between OS and psychological and social QOL. The significant indirect effects for all QOL domains suggest that emotional exhaustion is a critical pathway through which occupational stress exerts its detrimental effects.

However, the partial mediation for physical and environmental QOL indicates that other factors may also explain how occupational stress influences these areas of life. In contrast, the full mediation observed for psychological and social QOL emphasizes the central role of emotional exhaustion in these domains, underscoring the emotional toll that workplace stress can have on an individual's mental and social well-being.

Depersonalisation, on the other hand, fully mediated the relationship between OS and all four QOL domains. This suggests that the impact of occupational stress on QOL is channeled almost entirely through depersonalisation, particularly in social and environmental areas, where the indirect effects were strongest. Depersonalization's full mediation effect highlights the importance of addressing feelings of emotional detachment and cynicism in mitigating the negative effects of occupational stress on overall life satisfaction and functioning. This aligns with existing literature that suggests depersonalization is a core component of burnout, reducing quality of life (Maslach & Jackson, 1981).

Interestingly, Personal achievement did not significantly mediate the relationship between OS and any of the QOL domains. This suggests that while personal achievement is an important aspect of work-life balance and overall satisfaction, it does not significantly buffer the negative effects of occupational stress on quality of life in this context. The non-significant results could indicate that other psychological factors or work-related variables—such as job autonomy, social support, or coping mechanisms—may be more prominent in mediating the relationship between occupational stress and QOL.

The combined findings from the mediational models provide important implications for workplace interventions. Since emotional exhaustion and depersonalisation are the primary pathways linking occupational stress to decreased quality of life, interventions that target these aspects of burnout may be most effective in improving employee well-being. For instance, workplace stress management programs that focus on reducing emotional exhaustion through relaxation techniques, mental health support, and better work-life balance could navigate the negative impact of stress on Psychological and Social QOL. Similarly, incorporating a sense of purpose and meaningful engagement in their daily work may reduce feelings of depersonalisation, thereby improving physical and environmental aspects of quality of life. Overall, this study explores the importance of addressing burnout dimensions—particularly emotional exhaustion and depersonalisation—in understanding the detrimental effects of Occupational stress on Quality of life.

The Quality of life for Doctors' is significantly influenced by several interrelated factors. Occupational stress is a major contributor, with higher stress levels correlating with decreased physical, psychological, social, and environmental QoL. As seen in the present study the negative correlations and chronic exposure to stress can lead to physical exhaustion and illness, adversely affecting mental well-being and diminishing overall life satisfaction. Additionally, Burnout dimensions like emotional exhaustion and depersonalisation play a critical role in this context. Severe High levels of emotional exhaustion, in particular, are linked to deteriorating psychological and social QoL, highlighting the emotional toll that workplace stress can impose. Social support systems are also crucial, as strong social networks can buffer

against stress; however, high occupational stress may impede the maintenance of positive relationships, further impacting QoL.

Conclusion

The Present Study highlighted Occupational Stress and Burnout among health professionals, which means doctors and nurses working in Hospitals. Long-term exposure to stress and job requirements is severely damaging to mental well-being, professional performance, and quality of life. The results of the cross-sectional survey show the direct relationship of occupational stress with burnout and degrading quality of life. Medical institutions must be aware of these problems and act to create a better workplace environment and support structures for the workers in the health sector. In addition to improving the general effectiveness and caliber of patient treatment, it will also benefit the health of medical personnel.

Implications of the study on practice and future study

1. **Improved Employee Well-being:** The study sheds light on occupational stress and burnout in health care professionals. With this knowledge, hospital administrators would know what factors will need more support systems and policy formulation so that they can better protect the emotional well-being of their employees.
2. **Improved Quality of Patient Care:** Burnout among Doctors' results in decreased efficiency and effectiveness. The results of this study are likely to conclude that combating occupational stress and burnout would improve the care given to patients by having those Doctors' at their peak levels of physical and mental preparation to fulfill the requirements of their profession.
3. **Policy Development:** The results of the study depicted above can be a basis upon which the healthcare institutions develop policies to handle the effects of burnout, for example, by undertaking regular mental check-ups and counseling services and maintaining work-life balance.
4. **Training and Development:** As a finding, health organizations can take focused training programs to make the employees raise their awareness in handling occupational stress. The training could further equip them with the skills of identifying early stages of burnout among their workforce by their managers and supervisors.
5. **Longitudinal Studies:** Longitudinal studies will be important for future work, focusing on longer-term impacts on healthcare workers' mental and job performance related to interventions. This may be used to give insight into the efficacy of the different programs over time.
6. **Introduction to Quantitative and Qualitative Approaches.** The research should employ a mixed-method approach will enable an in-depth probing into experiences of Health Professionals regarding the role of Stress and Burnout for a better understanding of the causes behind the issues at hand.
7. **Intervention Efficacy:** Future studies may be conducted to determine the specific efficacy of certain stress-reduction interventions, for instance, mindfulness practices, counseling services, and physical wellness programs. The effectiveness of these strategies will inform organizations about which ones to introduce into their worksites.
8. **Cultural Considerations:** Future studies will focus on cultural factors that may cause or lead to stress and burnout among healthcare workers from different regions or countries. It contributes to knowledge of how cultural environments affect the welfare of employees in the workplace, underpinning the formulation of culturally sensitive interventions.

Limitations

1. Cross-sectional Design: This study adapts a cross-sectional design, allowing only a one-time data collection. This means that drawing long-term trends or directional relationships between the variables will not be feasible.
2. Self-report bias. The grounds of the data are the questionnaires through self-reporting, which could make the study susceptible to different kinds of biases since the participants may underrate or overrate their level of stress and burnout.
3. This calls for exclusion of temporary staff. The study shall exclude temporary or contractual healthcare workers whereby the stress and levels of burnout may be different among the non-permanent workforce.
4. Language Limitation: The requirement of proficiency in English by participants excludes some Doctors' who are strong in their native tongues but not as confident in English limits the pool of participants.
5. The study is only on Occupational stress, Burnout, and Quality of life while Coping style and personality traits are not examined. No support system has been explored in-depth.

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