

Burnout among resident doctors at Pokhara Academy of Health Sciences

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Abstract

Introduction

Doctors experiencing burnout are reported to be at a higher risk of making poor decisions; display hostile attitude toward patients; make more medical errors; and have difficult relationships with co-workers. Burnout among doctors also increases risk of depression; anxiety; sleep disturbances; fatigue; alcohol and drug misuse; marital dysfunction; premature retirement and perhaps most seriously suicide. This study aimed to determine the prevalence and levels of burnout among resident doctors using the Copenhagen Burnout Inventory and to examine its distribution across selected demographic and work-related characteristics.

Methods

A cross-sectional study was conducted among 63 resident doctors at Pokhara Academy of Health Sciences using a self-structured proforma for demographic data and the Copenhagen Burnout Inventory (CBI) to assess burnout across three domains: Personal, Work-Related, and Client-Related Burnout. Data were analyzed using descriptive statistics.

Results

The mean scores indicated moderate to high levels of burnout across all domains. The Work-Related Burnout domain scored the highest (mean score ~66.9%), followed by Personal Burnout (~63.2%) and Client-Related Burnout (~49.4%). High weekly working hours (often exceeding 100 hours), numerous night duties, and unsatisfactory stipends were common among participants. Subgroup analysis suggested higher burnout levels in certain specialties like Obstetrics & Gynecology and Surgery, and among those who had faced workplace violence.

Conclusion

Burnout is a significant issue among resident doctors at PoAHS, with work-related factors being a primary contributor. The findings underscore the urgent need for systemic interventions, including workload management, improved stipends, and the establishment of robust mental health support systems within medical training institutions to safeguard the well-being of future physicians.

Keywords

Burnout; Copenhagen Burnout Inventory; Internship and Residency; Mental Health; Nepal; Professional; Workload

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INTRODUCTION

Doctors are exposed to high levels of stress in the course of their profession and are particularly susceptible to experiencing burnout. Burnout has far-reaching implications on

doctors; patients and the healthcare system. Doctors experiencing burnout are reported to be at a higher risk of making poor decisions; display hostile attitude toward patients; make more medical errors; and have difficult relationships with co-workers.¹ Burnout among doctors also increases risk of depression; anxiety; sleep disturbances; fatigue; alcohol and drug misuse; marital dysfunction; premature retirement and perhaps most seriously suicide. Sources of stress in medical practice may range from the emotions arising in the context of patient care to the environment in which doctors practice. The extent of burnout may vary depending on the practice setting;

specialty and changing work environment.¹ There was substantial variability in prevalence estimates of burnout among physicians, ranging from 0% to 80.5%.² Young doctors and doctors working in tertiary hospitals are more at risk of burnout, probably related to shift of social culture related to the loss of medical humanities and a weak primary healthcare system.³ The study has shown that burnout is highly prevalent among resident doctors. Excessive workload and emotional distress were some of the factors associated with the three dimensions of burnout.⁴ Burnout was found to be a risk factor for myocardial infarction and coronary heart disease.⁵

Burnout is a state of physical or mental collapse caused by overwork or stress.⁶ Burnout syndrome is characterized by⁷

1. High levels of emotional exhaustion and
2. Depersonalization,
3. Reduced level of personal accomplishment.

Although burnout among physicians has been widely studied internationally, there is limited institutional-level evidence regarding burnout among resident doctors in tertiary care academic centres in Nepal. Resident doctors in such settings are exposed to prolonged working hours, high clinical responsibilities, and academic pressure, which may increase their vulnerability to burnout. However, few studies have examined burnout using standardized tools such as the Copenhagen Burnout Inventory among residents in Nepalese training institutions. Therefore, this study was conducted to assess the level of burnout among resident doctors and describe its distribution across demographic and work-related characteristics in a tertiary care teaching hospital.

METHODS

Subjects

Subjects for this study were recruited from the residents who were currently studying at Pokhara Academy of Health Sciences and gave consent for the study. Inclusion criteria were: i) Resident doctors at Pokhara academy of Health sciences who gave consent for the study. Exclusion Criteria were: i) Residents with known primary psychiatric illness that could interfere with completion of the questionnaire were excluded based on self-reported history provided in the demographic section of the survey questionnaire. ii) Resident who do not give consent. A total number of 63 residents were enrolled who gave written and verbal consent for the study.

Variables:

The primary outcome variable was burnout level measured using the Copenhagen Burnout Inventory. Independent variables included age, gender, marital status, year of residency, specialty, working hours per week, number of night duties, stipend satisfaction, workplace violence exposure, and living arrangements.

Instruments:

- Self-structured proforma: This proforma was developed by the authors to assess socio-demographic information (Age, Sex, Marital Status, Educational Status, Occupation).
- Copenhagen Burnout Inventory (CBI): A valid and reliable instrument, measures burnout in three different scales: personal burnout scale with 6 questionnaires, work-related burnout with 7 questionnaires, and client-related burnout with 6 questionnaires. Response in each questionnaire is recorded as:

1. Always or to very high degree (Scoring 100%)
2. Often or to high degree (Scoring 75%)
3. Sometimes or somewhat (Scoring 50%)
4. Seldom or to a low degree (Scoring 25%)
5. Never or almost never or to a very low degree (Scoring 0%)

Procedure

All residents studying at Pokhara Academy of Health Sciences were sent the self-structured proforma and CBI questionnaires prepared in Google Forms to their respective emails. Those residents who gave written and verbal consent were enrolled in the study.

Ethical considerations

Ethical approval for the study was obtained from the Institutional Review Committee of Pokhara Academy of Health Sciences prior to data collection. Participation in the study was voluntary and informed consent was obtained from all participants. Confidentiality and anonymity of responses were maintained throughout the study.

As the study assessed burnout levels among resident doctors, participants reporting high levels of burnout were informed about the availability of institutional mental health support services. They were encouraged to seek professional support through the Department of Psychiatry and existing mentorship mechanisms within the institution if required.

STATISTICAL ANALYSIS

Collected data were entered into Microsoft Excel and analyzed using SPSS version 20. Descriptive statistical methods including frequency, percentage, mean, and standard deviation were used to summarize the demographic characteristics and burnout domain scores. Results were presented using tables and graphical representations where appropriate.

RESULTS

Demographic and Work-Related Characteristics

There was a total of 63 residents working in different departments who gave consent and participated in this study. The mean age of participants was 30.2 years (range: 27–39 years). The study consisted predominantly of male participants (67.7%). Most participants were single (51.6%) and 48.4% were married.

Residents were from different years of training, mostly 2nd year (48.4%) and equal distribution from 1st and 3rd year (25.8% each). Participants represented a wide range of departments, with the highest representation from Surgery & subspecialties (22.6%), followed by Internal Medicine (19.4%), and Obstetrics & Gynecology (19.4%). Other departments included Pediatrics (9.7%), Radiology (6.5%), Pathology (6.5%), Psychiatry (3.2%), and Forensic Medicine (3.2%).

Among residents, 71% were living away from home. Regarding living arrangement, 25.8% were living alone, 32.3% with friends, and 41.9% with family.

Similarly, 29% reported facing workplace violence. Chronic medical illness and prior mental illness were present in 16.1% of participants. Smoking was reported by 19.4%, and 71% had used alcohol in the last year. Only 41.9% were satisfied with their stipend.

Weekly working hours ranged from 48–145 hours (mean ≈ 98 hours). Night duties averaged 8.7 per month (range 0–21).

Table 1: Demographic and Work-Related Characteristics of Resident Doctors (N=63)

Characteristics	Category	Frequency	Percentage	Range
Age	27-29 years	20	32.3%	Mean: 30.2 years
	30-32 years	33	51.6%	
	33+ years	10	16.1%	
Sex	Male	43	67.7%	
	Female	20	32.3%	
Marital Status	Single	33	51.6%	
	Married	30	48.4%	
Years of residency	1st Year	16	25.8%	
	2nd Year	31	48.4%	
	3rd Year	16	25.8%	
Department/ Specialty	Internal Medicine	12	19.4%	
	Obstetrics & Gynecology	12	19.4%	
	Surgery & Subspecialties	14	22.6%	
	Pediatrics	6	9.7%	
	Psychiatry	2	3.2%	
	Radiology	4	6.5%	
	Forensic Medicine	2	3.2%	
Workplace is Hometown?	No	45	71.0%	
	Yes	18	29.0%	
Living Arrangement	With friends	20	32.3%	
	Alone	16	25.8%	
	With family/spouse	27	41.9%	
Faced Workplace Violence	No	45	71.0%	
	Yes	18	29.0%	
Chronic Medical Illness	No	53	83.9%	
	Yes	10	16.1%	
Mental Illness	No	53	83.9%	
	Yes	10	16.1%	
Smoking Status	Non-smoker	51	80.6%	
	Smoker	12	19.4%	
Alcohol Use	No use within 1 year	18	29.0%	
	Use within 1 year	45	71.0%	
Stipend Satisfaction	Satisfied	27	41.9%	
	Not satisfied	36	58.1%	
Weekly Working Hours	< 80 hours	12	19.4%	Range: 48–145 hrs
	80–100 hours	24	38.7%	
	> 100 hours	27	41.9%	
Night Duties per Month	≤ 5 duties	20	32.3%	Mean: ~8.7 duties Range: 0–21
	6–10 duties	27	41.9%	
	> 10 duties	16	25.8%	

Table 2: Mean Scores on Copenhagen Burnout Inventory (CBI) Domains (N=63)

CBI Domain	Number of Items	Possible Score Range	Mean Score (%)	Interpretation
Personal Burnout	6	0-100	63.2	High
Work-Related Burnout	7	0-100	66.9	High
Client-Related Burnout	6	0-100	49.4	Moderate

The mean scores on the CBI showed that there was a significant amount of burnout among residents in our study. The most prominent burnout in CBI was work-related (66.9%) followed by personal (63.2%) which were high, and client-related burnout was found to be moderate with a mean score of 49.4%.

Analysis of subgroups revealed several trends associating higher burnout with specific factors:

1. According to speciality: We found high stress in departments like Obstetrics & Gynecology and Surgery compared to other departments like Radiology or Forensic Medicine. One of our residents reported working for 125 hours/week and scored 100% on several work-related burnout items. During our study we also found a case of a 1st-year resident who reported working 145 hours per week with 8 night duties, scoring 100% on 8 out of the 19 CBI items, indicating severe burnout. Conversely, a resident who was working 48 hours per week reported the lowest overall burnout scores in the cohort.

2. According to Workload: Working hours per week were also seen positively associated with personal and work-related burnout scores being high among them. There were residents working more than 100 hours per week who scored more than 70% on average in personal and work-related burnout.

3. According to Stipend Satisfaction: We found that residents who were dissatisfied with their stipend reported approximately 15-20% higher burnout scores across all domains compared to those who were satisfied.

4. According to Workplace Violence: Those residents who had reported experiencing workplace violence showed higher scores in the Work-Related and Client-Related Burnout domains.

5. According to Living Situation: Residents who were living with family or a spouse showed lower scores in Personal Burnout compared to those living alone.

DISCUSSION

This study shows that residents who are working in a government academic-based institution have a higher level of burnout which in turn has its effect on their mental health, wellbeing, and performance. This shows striking

evidence that work-related and personal burnout among residents is severe and needs to be addressed to resolve this issue.

Our study showed high mean scores in the Work-Related Burnout domain with 66.9%. This finding is consistent with the systematic review and meta-analysis about resident doctors by Rodrigues et al.¹⁰ A study among different residents from Kerala by Ratnakaran et al. also showed similar findings, which is also supported by the findings from Maheshwari et al. which was done among medicine practitioners in India.^{11, 12} Similarly, the work-related burnout was slightly higher in our study among residents compared to the study done among nurses at Birtamode.¹³ The reasons for higher burnout in our study could be due to prolonged working hours as long as more than 100 hours a week as reported in our study, which eventually leads to a state of chronic sleep deprivation and physical exhaustion. Moreover, a high number of night duties, workplace violence, and dissatisfaction with stipend could be other reasons for such findings. This could in turn relate to insecurity and hamper their performance.

We also found a higher level of personal burnout score (63.2%) among residents. These findings are alarming in the term that exhaustion not only affects the workplace but also personal life. This might affect overall quality of life and health, and they may find difficulties maintaining work-life balance. Compared to the global meta-analysis by Rodrigues et al.¹⁰, the personal burnout score observed in our study was slightly higher. This difference may be related to local workplace factors such as long duty hours, night shifts, and workload patterns among resident doctors in the study setting. Our findings were found to be similar with the study done in Kerala might be due to similar patterns of residency programs and working environments among neighboring regions.¹¹ Long duty hours, lack of adequate rest and exercise, and lack of time to care about mental and physical health aid to personal burnout, consistent with our findings.

Our study found Client-related burnout was moderate with a 49.4% score. This is lower compared to findings of other domains; however, it is noticeable as it can lead to a compromised approach to patient care. This may also compromise empathy and initiate unnecessary irritability during working hours, leading to a difficult doctor-patient relationship, possibly even leading to violence in the workplace. Our finding, similar to the study

by Maheshwari et al.¹², could be due to the study being done in a similar geographical region with a similar pattern of working hours, academic culture, and environment. Residents who reported experiencing workplace violence showed higher client-related burnout scores in our study. This observation highlights the importance of addressing workplace safety concerns in order to support resident wellbeing.

Our findings related to specialty-specific stress and the protective role of familial support are consistent with international studies. The findings of our study highlight that interventions should be department-specific and individualized.

LIMITATIONS

This study has several limitations. Its cross-sectional design allows for the identification of associations but cannot identify the causes. The sample size, while representative of a single institution, is relatively small. The use of self-reported data, particularly for working hours, may be subject to recall or social desirability bias. Furthermore, the study was conducted at a single center, which may limit the generalizability of the findings to all medical institutions in Nepal.

Conclusion and Recommendations

The high prevalence of burnout among resident doctors at Pokhara Academy of Health Sciences, as shown by the Copenhagen Burnout Inventory, is a clear and pressing call to action. The well-being of these physicians is important and is linked to the quality and safety of patient care. Allowing this situation to persist is not beneficial to either the medical workforce or the public they serve.

Based on our findings, we recommend the following multi-faceted approach:

- Enforce Reasonable Working Hours: The weekly working hours must be defined and there must be adequate rest periods between shifts.
- Review Stipend Structure: Conduct a review of the stipend system to ensure it is fair, commensurate with the workload, and provides a decent standard of living.
- Workplace Violence Protection: Establish a zero-tolerance policy for workplace violence and create clear, accessible protocols for reporting and managing such incidents.

- Establish Mentorship and Support Programs: We must create formal and confidential peer-support groups and mentorship programs where residents can share experiences and seek guidance, including access to mental health services and intradepartmental support to reduce burnout.

In conclusion, safeguarding the mental health of resident doctors is very important for a sustainable and effective healthcare system. Investing in the well-being of today's trainees is an investment in the future of healthcare in Nepal.

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