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Mental Health Status and Stress Factors Among Junior Doctors in Public Hospitals in Bangladesh: A Cross-Sectional Analysis

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ABSTRACT: *Background:* Junior doctors are often subjected to high levels of workplace stress, contributing to poor mental health outcomes. In resource-limited settings like Bangladesh, the compounded challenges of excessive work hours, night shifts, and systemic inadequacies further exacerbate these issues. *Objective:* This study aimed to assess the mental health status of junior doctors and identify key stress factors influencing their psychological well-being in public hospitals in Khulna, Bangladesh. *Methods:* This cross-sectional study was conducted from January to June 2024, involving 120 intern doctors and 36 medical officers from three private medical colleges in Khulna. Data were collected using a structured questionnaire incorporating the General Health Questionnaire (GHQ-12) to assess mental health. Statistical analyses, including chi-square tests, independent t-tests, and logistic regression, were performed to identify associations and predictors of psychological distress. *Results:* Half of the participants (50.0%) exhibited normal mental health, while 30.1% had mild psychological distress, and 19.9% experienced severe distress. Key stressors included high patient load (83.3%), poor work-life balance (70.5%), lack of supervision (73.7%), and limited resources (62.8%). Longer work hours (≥60 hours/week) were significantly associated with higher GHQ-12 scores (mean: 10.4 ± 3.1; p=0.002). Night shifts ≥5 per month were a strong predictor of severe distress (OR=4.8, p<0.001), alongside poor work-life balance (OR=2.9, p=0.008). Coping mechanisms such as peer support (65.4%) were commonly adopted. *Conclusion:* The study highlights a significant prevalence of psychological distress among junior doctors, emphasizing the impact of prolonged work hours, frequent night shifts, and systemic challenges. Addressing these issues through policy reforms and mental health support programs is crucial to improving junior doctors' well-being and healthcare delivery.

Keywords: Junior Doctors, Mental Health, Stress Factors, Workplace Stress, Bangladesh.

INTRODUCTION

Mental health is a positive state characterized by responsibility, self-awareness, self-direction, and the ability to cope with daily challenges. Individuals with good mental health are generally worry-free, function well in society, and find life satisfaction [1]. They can solve problems, handle crises, and maintain a sense of well-being by enjoying life, setting realistic goals, and adapting to situations as needed without permanently losing their independence [2]. Physicians working in healthcare settings,

particularly in medical college hospitals, face significant stress due to heavy workloads, professional responsibilities, and the demands of maintaining strong patient-doctor relationships [3]. Often, they operate with limited administrative support, further intensifying their challenges. Such stressful environments inevitably affect their physical and mental health [4]. Unfortunately, mental health issues are frequently underestimated and often overshadowed by stigma. Unlike physical illnesses, where patients primarily suffer from the disease itself, individuals with mental health conditions face an added burden of stigma. This stigma manifests in two forms: public stigma, which refers to society's negative reactions toward individuals with mental illness, and self-stigma, where individuals internalize these prejudices [5]. The impact of stigma is profound. People with mental illness must contend not only with their symptoms but also with societal misconceptions and stereotypes. This stigma extends even to well-trained professionals, including those in mental health disciplines, who may unknowingly harbor biased attitudes. Physicians, despite being healthcare providers, are often reluctant to address their mental health issues, such as depression—a leading cause of morbidity and mortality that disproportionately affects them [6]. Mental health issues among healthcare professionals, especially junior doctors, are a growing concern worldwide 7]. The demanding nature of the medical profession, coupled with long working hours, inadequate resources, and high patient load, places junior doctors at significant risk of psychological distress. This is particularly alarming given the critical role they play in the healthcare system, often serving as the first point of contact for patients [8]. In Bangladesh, the challenges faced by junior doctors are further amplified by systemic inadequacies, including resource limitations, high patient-to-doctor ratios, and the lack of mental health support services in most healthcare institutions [9, 10]. These factors not only compromise the mental well-being of healthcare workers but also affect the quality of care they provide. Studies in low- and middle-income countries have consistently highlighted a high prevalence of stress, anxiety, and burnout among junior doctors. For instance, prolonged work hours and frequent night shifts have been identified as significant contributors to psychological distress [9, 11]. Despite the critical nature of this issue, there is a paucity of research focusing on the mental health of junior doctors in Bangladesh. Understanding the extent of psychological distress and its associated stress factors is essential for developing targeted interventions and fostering a supportive work environment [12, 13]. This study aims to assess the mental health status of junior doctors in public hospitals in Khulna, Bangladesh, and identify the key work-related stressors influencing their well-being. By addressing these gaps in knowledge, the findings can inform policy recommendations and institutional reforms to improve the mental health outcomes of junior doctors, ultimately enhancing the quality of healthcare delivery.

METHODOLOGY

This was a cross-sectional study conducted among junior doctors working in three private medical colleges in Khulna, Bangladesh. The study population consisted of 120 intern doctors and 36 medical officers, making a total sample size of 156 participants. Data collection took place over six months, from January to June 2024. The data were collected using a structured questionnaire designed to assess mental health status and stress factors. The questionnaire included sections on sociodemographic information, work-related stressors, and mental health indicators. Tools such as the General Health Questionnaire (GHQ-12) and a validated stress assessment scale were employed to ensure accurate measurement of psychological well-being and stress levels. Participants were recruited through purposive sampling, and written informed consent was obtained from each respondent before participation. Data collection was conducted through face-to-face interviews and self-administered questionnaires, depending on participant availability. Strict confidentiality was maintained throughout the study to protect participants' identities and personal information. Ethical clearance was obtained from the Institutional Review Board (IRB) of the respective medical colleges before initiating the study.

RESULTS

Table 1: Sociodemographic Characteristics of Study Participants (N=156)

Variables	Categories	Frequency (n)	Percentage (%)
Age (years)	24–26	88	56.4
	27–30	68	43.6
Gender	Male	78	50.0
	Female	78	50.0
Marital Status	Single	116	74.4
	Married	40	25.6
Monthly Income (BDT)	<30,000	92	59.0
	≥30,000	64	41.0

Table 1 shows the distribution of sociodemographic characteristics. The majority of participants (56.4%) were aged between 24–26 years, with an equal distribution of male and female participants. Most (74.4%) were single, and 59% had a monthly income of less than 30,000 BDT.

Table 2: Work Hours and Shift Patterns

Variables	Categories	Frequency (n)	Percentage (%)
Average Weekly Work Hours	<60 hours	54	34.6
	≥60 hours	102	65.4
Night Shifts per Month	<5	62	39.7
	≥5	94	60.3
Frequency of Breaks During Shift	Regular Breaks	47	30.1
	Irregular/No Breaks	109	69.9

Table 2 illustrates work-related characteristics. More than 65% of participants worked over 60 hours weekly, and 60.3% had five or more-night shifts per month.

Table 3: Mental Health Status (GHQ-12 scores)

GHQ-12 Score Categories	Frequency (n)	Percentage (%)
Normal	78	50.0
Mild Psychological Distress	47	30.1
Severe Psychological Distress	31	19.9

Table 3 reveals mental health status. Half of the participants had normal GHQ-12 scores, while 19.9% experienced severe psychological distress.

Table 4: Common Stress Factors Among Participants

Stress Factors	Yes (n, %)	No (n, %)
High Patient Load	130 (83.3)	26 (16.7)
Lack of Proper Supervision	115 (73.7)	41 (26.3)
Job Insecurity	72 (46.2)	84 (53.8)
Limited Access to Resources	98 (62.8)	58 (37.2)
Poor Work-Life Balance	110 (70.5)	46 (29.5)

Table 4 highlights the prevalence of stress factors. High patient load (83.3%) and poor work-life balance (70.5%) were the most frequently reported stressors.

Table 5: Coping Mechanisms Adopted by Participants

Coping Mechanism	Frequency (n)	Percentage (%)
Talking with Colleagues/Friends	102	65.4
Exercise or Physical Activity	39	25.0
Meditation/Relaxation	15	9.6

Table 5 summarizes the coping mechanisms used by participants. Talking with colleagues or friends was the most common method (65.4%).

Table 6: Association Between Work Hours and Mental Health

Work Hours	GHQ-12 Score (Mean ± SD)	t-value	p-value
<60 hours	8.2 ± 2.3		
≥60 hours	10.4 ± 3.1	3.21	0.002**

Table 6 presents the association between weekly work hours and mental health. Those working ≥60 hours had significantly higher GHQ-12 scores (p=0.002).

Table 7: Association Between Night Shifts and Psychological Distress

Night Shifts/Month	Psychological Distress (n, %)	χ^2-value	p-value
<5	18 (29.0)		
≥5	60 (63.8)	18.92	<0.001**

Table 7 shows that participants with ≥5-night shifts per month experienced significantly more psychological distress (p<0.001).

Table 8: Logistic Regression Analysis for Predictors of Severe Psychological Distress

Variables	Odds Ratio (OR)	95% CI	p-value
Weekly Work Hours ≥60	3.5	1.6–7.8	0.002**
Night Shifts ≥5	4.8	2.1–10.9	<0.001**
Poor Work-Life Balance	2.9	1.3–6.5	0.008**

Table 8 outlines the logistic regression results. Night shifts ≥5 (OR=4.8, p<0.001) and weekly work hours ≥60 (OR=3.5, p=0.002) were strong predictors of severe psychological distress.

DISCUSSION

This study aimed to explore the mental health status and stress factors among junior doctors in public hospitals in Bangladesh. The findings revealed critical insights into the psychological challenges faced by this population. Half of the participants (50.0%) exhibited normal mental health according to the GHQ-12, while 30.1% showed mild psychological distress, and 19.9% experienced severe psychological distress. These findings align with studies conducted in other countries, such as Nigeria, where 42.5% of junior doctors reported psychological distress due to workplace stress [1]. Similarly, a study in India found that 25% of junior doctors faced severe psychological stress [2]. Work hours and night shifts significantly influenced the mental health of participants. Over two-thirds (65.4%) of participants worked ≥60 hours per week, and 60.3% had five or more-night shifts per month. A significant association was found between longer work hours and higher GHQ-12 scores (p=0.002), with those working ≥60 hours reporting a mean score of 10.4 ± 3.1 compared to 8.2 ± 2.3 for those working fewer hours. This is consistent with a systematic review that reported prolonged work hours as a major contributor to burnout and psychological distress among healthcare workers [3]. Additionally, participants with five or more-night shifts per month were significantly more likely to experience psychological distress (p<0.001). This finding aligns with a study conducted in Pakistan, which found that frequent night shifts increased stress and disrupted work-life balance among junior doctors [4]. High patient load was the most frequently reported stressor, affecting 83.3% of participants. Poor work-life

balance (70.5%), lack of supervision (73.7%), and limited access to resources (62.8%) were also prominent stress factors. These stressors reflect systemic challenges in healthcare systems in resource-limited settings like Bangladesh. Similar findings were reported in a Malaysian study where 75% of junior doctors cited high patient load as a primary stressor [5]. Talking with colleagues or friends was the most commonly adopted coping mechanism (65.4%), followed by exercise (25.0%) and meditation (9.6%). These strategies reflect the importance of peer support and social networks in mitigating stress. Studies from other countries have also highlighted the efficacy of social support in reducing workplace stress among healthcare professionals [6]. Logistic regression analysis identified key predictors of severe psychological distress. Night shifts ≥5 (OR=4.8, p<0.001) and weekly work hours ≥60 (OR=3.5, p=0.002) emerged as the strongest predictors. Poor work-life balance (OR=2.9, p=0.008) also significantly increased the risk of distress. These findings echo a study conducted in the UK, which found that excessive work hours and poor work-life integration were significant contributors to burnout and depression among junior doctors [7]. The high prevalence of psychological distress among junior doctors underscores the need for systemic interventions. Recommendations include optimizing work schedules, limiting night shifts, and providing mental health support services. Incorporating wellness programs and promoting stress management strategies can also improve the overall well-being of junior doctors. This study is not without limitations. The cross-sectional design prevents causal inferences, and the sample was limited to three medical colleges in Khulna, which may limit generalizability. Future research should include larger, more diverse populations and longitudinal designs to better understand the mental health dynamics among junior doctors.

CONCLUSION

This study highlights the significant burden of mental health challenges among junior doctors in Bangladesh. Addressing work-related stressors and fostering a supportive work environment is crucial to improving their mental well-being and, ultimately, the quality of healthcare delivery.

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