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Mental Health Challenges Among Medical Officers in Monaragala District Sri Lanka: Investigating Depression, Anxiety, Stress, and sleep quality

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Research Article

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Abstract

Background: Medical officers working in rural districts of Sri Lanka are exposed to significant occupational stressors that may adversely affect their mental health and sleep quality.

Objectives: To determine the prevalence and severity of depression, anxiety, and stress among medical officers (MOs) in Monaragala District and to assess their association with sleep quality. We further hypothesized that higher psychological distress would be associated with poorer sleep quality and that female doctors would report greater distress than males.

Design: Descriptive cross-sectional study.

Setting: Government hospitals in Monaragala District, Sri Lanka.

Participants: Sixty-eight medical officers who were actively engaged in clinical duties during the study period. Interventions: None.

Primary and Secondary OutcomeMeasures: Primary outcomes were the prevalence and severity of depression, anxiety, and stress measured using the Depression Anxiety Stress Scale–21 (DASS-21). Secondary outcomes included sleep quality assessed using the Pittsburgh Sleep Quality Index (PSQI), associations between psychological distress and sleep quality, and gender differences in mental health outcomes.

Results: Symptoms of anxiety were reported by 60% of participants, depressive symptoms by 48%, and stress symptoms by 42%. Moderate-to-extremely severe symptoms were observed in approximately one-third of participants for anxiety and depression. Poor sleep quality (PSQI >5) was identified in 52% of medical officers. Depression, anxiety, and stress scores were strongly intercorrelated ($r > 0.70$, $p < 0.01$). Psychological distress demonstrated moderate positive correlations with poor sleep quality ($r = 0.31–0.44$, $p < 0.01$). Female medical officers had significantly higher mean depression, anxiety, and stress scores compared to males ($p < 0.05$).

Conclusions: Psychological distress and sleep disturbances are highly prevalent among medical officers in Monaragala District. Anxiety was the most common symptom domain. Poor sleep quality was significantly associated with higher levels of psychological distress. Female medical officers appear particularly vulnerable. These findings highlight the need for workplace-level mental health screening and targeted support interventions.

Article Summary

Strengths and limitations of the study

1. It included medical officers from multiple hospitals, enhancing the generalizability of the findings within the Monaragala District.

2. Standardized and validated instruments (DASS-21 and PSQI) were used to assess psychological distress and sleep quality. The response rate was high, minimizing selection bias.
3. The cross-sectional design limits the ability to establish causal relationships between psychological distress, sleep problems, and associated factors.
4. Data were based on self-reported measures, which may be subject to reporting bias.
5. The study was conducted in a single district, and findings may not be fully representative of medical officers in other regions of Sri Lanka.
6. Additionally, pre-existing subclinical mental health issues may not have been fully captured despite exclusion criteria.

Patient and Public Involvement

Patients and the public were not involved in the design, conduct, reporting, or dissemination plans of this research.

Research Topic: Mental Health Challenges Among Medical Officers in Monaragala District Sri Lanka: Investigating Depression, Anxiety, Stress, and Sleep Quality

Background

The prevalence of psychological distress is increasing worldwide (1). Medical professionals are particularly vulnerable due to stressful working environments, long working hours, and high professional expectations. Among them, rural working medical officers represent a high-risk group for developing depression, anxiety, and stress during the transition from undergraduate training to independent clinical practice (2).

Depressive disorders are defined as disorders characterized by a depressive mood (e.g., sad, irritable, or empty) or loss of pleasure, accompanied by cognitive, behavioral, or neurovegetative symptoms that significantly impair functioning (3). Anxiety disorders are characterized by excessive fear and anxiety and related behavioral disturbances, with symptoms severe enough to cause significant distress or impairment in personal, social, educational, or occupational functioning (3). Stress is defined as a state of worry or mental tension caused by a difficult situation. While mild stress may enhance performance, excessive or prolonged stress adversely affects both physical and mental health (4).

The prevalence of depression among medical officers has not been clearly established; however, national estimates range from 15% to 30% (5, 6). Suicide has been reported as the second most common cause of death among medical students, and a study found that 9.4% of fourth-year medical students and reported suicidal ideation within the preceding two weeks (7). These

findings indicate a substantial burden of psychological morbidity during early medical careers.

The development of mental illness is multifactorial and influenced by biological, psychological, socioeconomic, and lifestyle factors (8, 9). Occupation-related factors such as high job demand, low job control, long working hours, and poor workplace support have been consistently associated with adverse physical and mental health outcomes, including anxiety, depression, and fatigue (10–12). Healthcare professionals frequently work in high-pressure clinical environments with excessive patient loads, further predisposing them to stress, anxiety, and depression (13, 14).

In Sri Lanka, ship is a compulsory continuation of medical education and a prerequisite for registration with the Sri Lanka Medical Council (15). Medical officers' function under the administrative control of the head of the institution and are expected to work under the supervision of consultants, seeking guidance from senior medical officers at all times (15).

During the one-year ship period, medical officers are entitled to only fourteen days of leave; any leave exceeding this allocation results in repetition of the ship (15) Although official duty hours are from 8:00 am to 4:00 pm, are expected to arrive at the ward before 7:30 am to complete ward work prior to consultant rounds. Outside routine duty hours, are required to re on-call, and they do not receive regular nights off (15).

Due to workforce shortages, medical officers are often required to re continuously on-call throughout the ship year without scheduled breaks. This working pattern significantly compromises both sleep duration and sleep quality (15).

Poor sleep has been shown to contribute to psychological distress, impaired functioning, and

burnout.Medical officers receive an allowance rather than a formal salary. In many hospitals, food and accommodation are not provided, contributing to financial strain. These difficulties have been further exacerbated by the current economic crisis in Sri Lanka, resulting in challenges in taining a balanced diet and adequate self-care (15).

At the completion of the ship, medical officers undergo a formal performance appraisal by consultants. Violations related to work performance, conduct, neglect of duties, or patient care are taken seriously and may result in repetition of the ship and delayed registration (15). The high stakes associated with this evaluation process add to psychological stress during the ship period.

Collectively, these factors contribute to increased psychological stress among medical officers. A Sri Lankan study on health-related attitudes, behaviors, and burnout among medical officers reported burnout rates significantly higher than those observed in Western countries (16). Burnout, defined by Maslach as emotional exhaustion, depersonalization, and reduced personal accomplishment, commonly occurs among individuals engaged in people- oriented work (30).

medical officers face substantial challenges in self-care, including inadequate physical activity, poor dietary habits, and insufficient sleep (16). High levels of emotional exhaustion and depersonalization have been reported, which negatively affect patient care and professional performance (16). Poor sleep

quality has been shown to be significantly associated with emotional exhaustion, and higher burnout levels correlate with reduced quality of patient care (16).

According to the World Health Organization, Sri Lanka has a high and increasing prevalence of mental illness, further intensified by the ongoing economic crisis. While evidence suggests that burnout among medical professionals is associated with adverse mental health outcomes, this

relationship has not been adequately explored among medical officers in Sri Lanka. Furthermore, there is a lack of recent studies examining the prevalence of depression, anxiety, stress, and sleep disturbances in this population.

Given the high burden of occupational stressors and the absence of contemporary local data, it is hypothesized that medical officers in Sri Lanka experience a high prevalence of psychological morbidity and sleep disturbances. Systematic assessment of these outcomes is essential to inform targeted interventions, occupational health policies, and strategies aimed at improving well-being and patient care.

Methods

Sample size calculation

The sample size was calculated to estimate the prevalence of psychological distress among medical officers using the formula for a single population proportion:

Where N is the required sample size, Z is the standard normal deviate corresponding to a 95% confidence level (1.96), p is the assumed prevalence of psychological distress, and d is the desired precision.

In the absence of Sri Lanka–specific prevalence data, the prevalence of psychological distress was assumed to be **59%**, based on studies conducted among junior doctors in India. The desired precision was set at **0.1**.

$$= \frac{(1.96)^2 \times 0.59 \times (1 - 0.59)}{(0.1)^2} = 92$$

Accordingly, the minimum required sample size was **92 medical officers**.

Data were collected using an **interviewer-administered semi-structured questionnaire**

(Appendix I), which comprised the following components:
1. Sociodemographic questionnaire

2. Depression Anxiety Stress Scale–21 (DASS-21)

3. Pittsburgh Sleep Quality Index (PSQI)

The DASS-21 is available for academic use without the requirement for formal permission, as it is considered public property. Permission to use the PSQI was obtained from **Daniel J. Buysse, MD**, Distinguished Professor of Psychiatry and Medicine, via email dated **4 January 2024**.

Inclusion criteria

All medical officers

Exclusion criteria

medical officers were excluded if they:

1. Had a diagnosed depressive disorder, anxiety disorder, or any other psychiatric illness prior to commencing the ship
2. Had a diagnosis of a major medical illness
3. Were unwilling to provide informed consent or participate voluntarily

Data collection procedure

Permission to conduct the study was obtained from the Directors of the respective hospitals. Consultants in charge of the relevant wards were informed prior to data collection.

Eligible medical officers were approached by the researcher and invited to participate, ensuring confidentiality throughout the process.

Written informed consent was obtained from each participant prior to assessment. Sociodemographic data were collected using a self-administered questionnaire. Participants were informed of their right to withdraw from the study at any time without providing a reason and without facing any adverse consequences. Adequate time was provided to ask questions and seek clarification, and contact details of the principal investigator and the Ethics Review Committee were provided.

Medical officers who demonstrated significant depressive or anxiety symptoms or other mental health concerns based on screening results underwent a comprehensive psychiatric assessment, including a full psychiatric history and mental state examination. This assessment was conducted by the principal investigator or a psychiatry registrar with the participant's consent. Where clinically indicated, participants were referred for further management and care while ensuring confidentiality.

Ethical considerations

Ethical approval for the study was obtained from the **Ethics Review Committee of the Postgraduate Institute of Medicine, University of Colombo**.

Written informed consent was obtained from all participants. Data collection and handling were carried out solely by the investigator to ensure anonymity and maintain confidentiality.

Electronic data were password-protected and accessible only to the investigator.

Permission was also obtained from the relevant consultants. Participants diagnosed with depressive or anxiety disorders were referred to the Psychiatry Unit for appropriate management with their consent. Study records, both paper- based and electronic, will be retained for **five years** following publication and disposed of in accordance with accepted procedures.

Data analysis

Statistical analysis was conducted using **SPSS software**. Descriptive statistics were used to summarize sociodemographic characteristics and to describe the prevalence and severity of depression, anxiety, and stress. Continuous variables were summarized using means and standard deviations or medians and interquartile ranges, as appropriate, while categorical variables were presented as frequencies and percentages.

Associations between psychological variables and relevant sociodemographic and sleep- related factors were examined using **chi-square tests**, **correlation coefficients**, and **independent sample t-tests**, as appropriate. A p value of **< 0.05** was considered statistically significant.

Results

Participant Characteristics

A total of 68 medical officers participated in the study, yielding a response rate of 100% among those approached.

Both male and female medical officers were represented. The majority of participants were married and had children. A substantial proportion reported that their monthly income was insufficient to meet total monthly expenditure, indicating financial strain.

With regard to work-related factors, many participants reported missing meals due to increased workload. Dissatisfaction with hospital-provided accommodation was also commonly reported. Additional occupational stressors included long working hours, continuous on-call duties, and perceived inadequate senior support.

Prevalence of Depression, Anxiety, and Stress

Psychological distress was assessed using the Depression Anxiety Stress Scale–21 (DASS-21). Overall prevalence (any level above normal):

- Anxiety: 60%
- Depression: 48%
- Stress: 42%

Approximately one-third of participants fell within the moderate-to-extremely severe range for anxiety and depression. Anxiety was the most prevalent psychological symptom domain. Stress symptoms were present in over two-fifths of participants, with a notable proportion reporting moderate severity.

These findings indicate a considerable burden of psychological morbidity among medical officers in Monaragala District.

Sleep Quality Among Medical Officers

Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI).

- Poor sleep quality (PSQI > 5): 52%
- Good sleep quality (PSQI ≤ 5): 48%

More than half of the participants reported clinically significant sleep disturbances. Frequently reported problems included prolonged sleep latency, shortened sleep duration, frequent nocturnal awakenings, and daytime dysfunction.

Association Between Psychological Distress and Sleep Quality Psychological variables were strongly intercorrelated:

- Depression, anxiety, and stress showed strong positive correlations ($r > 0.70$, $p < 0.01$).

Moderate positive correlations were observed between psychological distress and poor sleep quality:

- Depression and PSQI: $r = 0.31–0.44$ ($p < 0.01$)
- Anxiety and PSQI: $r = 0.31–0.44$ ($p < 0.01$)
- Stress and PSQI: $r = 0.31–0.44$ ($p < 0.01$)

Medical officers with moderate-to-severe psychological symptoms were significantly more likely to report poor sleep quality compared to those with normal or mild symptoms.

Association Between Sociodemographic Factors and Psychological Distress

Financial strain, missing meals due to workload, dissatisfaction with accommodation, poor senior support, and experiences of emotional abuse were significantly associated with higher levels of depression, anxiety, and stress ($p < 0.05$).

Female medical officers had significantly higher mean depression, anxiety, and stress scores compared to males ($p < 0.05$).

Clinical Follow-up

Participants who screened positive for severe or extremely severe psychological symptoms were offered comprehensive psychiatric assessment. Those requiring further intervention were referred to the Psychiatry Unit with informed consent.

Discussion

This study examined the prevalence of psychological distress and sleep disturbances among medical officers working in the government sector in Monaragala District, Sri Lanka. The findings demonstrate a high prevalence of anxiety, depressive symptoms, stress, and poor sleep quality in this population.

Anxiety emerged as the most prevalent condition, affecting 60% of participants. Nearly half reported depressive symptoms, and over two-fifths reported stress. These figures indicate a substantial mental health burden among medical officers in a rural district setting.

The prevalence observed is comparable to findings from South Asian countries such as Bangladesh, Pakistan, and India, where high levels of psychological morbidity among junior doctors and medical officers have been reported. While studies from high-income countries such as Australia and the United Kingdom often report relatively lower prevalence rates, psychological distress among doctors remains a global concern.

Several contextual factors unique to the Sri Lankan government medical service may contribute to the elevated psychological burden. Medical officers frequently work prolonged hours with continuous on-call duties and limited rest opportunities. Financial strain, dissatisfaction with accommodation, and missing meals due to workload further compound stress levels.

Poor sleep quality was highly prevalent (52%) and showed significant associations with depression, anxiety, and stress. This supports existing evidence of a bidirectional relationship between sleep disturbances and psychological distress. Sleep deprivation may exacerbate emotional dysregulation and cognitive impairment, while psychological distress may interfere with sleep initiation and maintenance.

The observed associations between psychological distress and workplace factors—including poor senior support

and emotional abuse—highlight the critical role of organizational environment in shaping mental well-being. These findings are consistent with prior Sri Lankan research demonstrating high levels of burnout and emotional exhaustion among medical professionals.

The implications extend beyond individual well-being. Psychological distress and sleep deprivation among doctors have been linked to impaired decision-making, increased medical errors, reduced empathy, and compromised patient care. Addressing mental health concerns among medical officers is therefore essential for maintaining healthcare quality and patient safety.

Conclusion

This study demonstrates a high prevalence of anxiety, depression, stress, and poor sleep quality among medical officers in Monaragala District, Sri Lanka. Psychological distress was significantly associated with poor sleep quality and adverse work-related and socioeconomic factors. Female medical officers were particularly vulnerable.

These findings underscore the urgent need for:

- Improved duty scheduling and protected rest periods
- Better accommodation and nutritional support
- Strengthened supervisory and organizational support systems
- Routine screening for psychological distress and sleep disturbances
- Confidential mental health referral pathways

System-level interventions are essential to safeguard the mental well-being of medical officers and ensure optimal patient care outcomes.

Declarations

- Conflicts of interest: None
- Ethical approval: Obtained from the Ethics Review Committee, University of Colombo
- **Data availability: Available upon request**

Availability of Data and Materials

The datasets generated and/or analyzed during the current study are available from the

corresponding author on reasonable request.

Competing Interests

The author declares no competing interests. Funding

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Author Contributions

Dr. MP Sudarshani: Study design, data collection, analysis, manuscript writing.

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