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Mental health and burnout in Nepalese medical students: an observational study

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Abstract

Background: Mental health problems among medical students are highly prevalent internationally. There have been very few studies however in Nepal. This study aimed to assess the frequency of mental health problems and burnout in Nepalese medical students.

Results: A total of 169 students responded to the questionnaire. Half (50%) of the surveyed students had some form of mental health problem according to the GHQ-12, while the OLBI showed that 85% students were disengaged and 65% were exhausted. The CAGE screening tool was positive in 14%, and 11% described illicit drug use. Sixty-four percent of students identified their academic studies as their major source of stress.

Conclusions: Timely recognition of mental health problems is imperative to avert psychiatric illness. Training on early identification and management of stress would be helpful. Further studies are required to identify the factors associated with poor mental health.

Keywords: Medical students, Nepal, Mental health, Stress

Background

Research worldwide has demonstrated a higher frequency of mild mental health disease and worse quality of life among medical students, when paralleled with an age-matched population [1–7].

Medical students are exposed to multiple stressors that may detrimentally affect their mental health, such as study, difficult academic environments, heavy workload, sleeplessness, and exposure to serious illness. They are also exposed to substantial tuition fees incurring financial difficulties, constant travel raising housing concerns, and/or a lack of recreational activities [8, 9]. These issues may result in significant anxiety or mood disorders, compromise academic attainment, and heighten the risk of medical errors, dropout, alcohol and substance abuse, and tragically in some cases suicide [10–12]. Interestingly, these problems are also seen to mature and endure among junior doctors [13, 14].

Studies have shown that medical students and doctors are highly prone to burnout. Burnout refers to a psychological syndrome distinguished by overwhelming exhaustion, depersonalization, and a decline in one's productivity [15]. This in turn can lead to such things as poor patient care, increases in medical errors, suicidal ideation, and substance misuse [16–18].

There is minimal information in the literature regarding psychological distress in Nepalese medical students and trainee doctors. In Nepal, a number of studies have previously been published assessing the burden of anxiety and mood disorders within the medical student population. These studies demonstrated a high burden of anxiety and depression, with a prevalence of 35–45% and 29–31%, respectively [3, 19–21]. The aim of this study was to further ascertain the prevalence of mild mental health problems, burnout, and stressors in Nepalese medical pupils.

Methods

Our study used an online survey on the Typeform platform. This ensured anonymity for participants. Students

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from Nepal took part alongside students from many countries and were invited by an array of methods in medical schools and on social media. Information collected included demographic data such as year of study, age, gender, and highest educational level achieved by the parents. Previous mental health issues prior to medical school entry such as diagnosis of a mental health condition, use of psychiatric medication, and current mental health issues were explored. The consumption of alcohol and/or drugs and burnout were measured using the CAGE questionnaire and the OLBI respectively.

The Oldenburg Burnout Inventory (OLBI) [22] is a reliable and valid burnout inventory that has been well used over time and in different groups. It aims to measure two main factors, namely exhaustion and disengagement, through the use of sixteen questions that are ranked based on level of agreement. A respondent's total burnout score places the individual in categories ranging from very low to very high risk of burnout. The General Health Questionnaire (GHQ-12) [23] and the CAGE questionnaire [24] were included to detect minor psychological problems and alcohol and substance-related problems among students. Data was collected and stored in Excel spreadsheets and analyzed to provide means or percentages with standard deviations (SD) or 95% confidence intervals (CI).

Results

One hundred sixty-nine medical students from two Nepalese universities responded. Table 1 represents the demographics data obtained from this sample. Females accounted for 50% of the respondents. Out of those who participated, 17% were in their 1st year of study, 11% in the 2nd year, 24% in the 3rd year, 14% in the 4th year, 17% in the 5th year, and 18% were post graduate students. Most students indicated high academic achievement within their family, with 65% specifically indicating that their parents held a graduate degree. Eighty percent of students did not take up any other part-time or full-time employment in conjunction with their medical studies.

Prior to joining medical school, 4% of students had been diagnosed with a mental health condition. This increased to 8% within medical school. Sixty-four percent of students indicated that their academic studies represented their leading source of stress. The CAGE test showed that 14% were screened positive for problem drinking and potential alcohol problems. Twenty-three students (14%) described taking medications to enhance concentration or feel better, while 11% of students reported the use of recreational drugs. Table 2 provides a summary of these issues.

Half of the respondents (50%) scored above threshold on the GHQ-12, indicating some mental health problems.

Table 1 The sociodemographic characteristics of the Nepalese respondents

| Characteristics | Number of students, N | Percentage, % |
|--|-----------------------|---------------|
| Year of study | | |
| 1 | 28 | 17% |
| 2 | 18 | 11% |
| 3 | 41 | 24% |
| 4 | 24 | 14% |
| 5 | 28 | 17% |
| Postgraduate | 30 | 18% |
| Gender | | |
| Male | 85 | 50% |
| Female | 84 | 50% |
| Educational attainment of parents | | |
| High school or below | 50 | 30% |
| GCSE/O-Level equivalent | 2 | 1% |
| A-Level equivalent | 5 | 3% |
| Undergraduate degree | 45 | 27% |
| Postgraduate degree | 65 | 38% |
| Part time work in conjunction with medical studies | | |
| Not currently | 135 | 80% |
| Working less than eight hours | 4 | 2% |
| Working more than eight hours | 29 | 17% |

The mean score on the GHQ 12 was 3.5. The mean score on the OLBI (for burnout syndrome) was 2.5. Disengagement was identified in 85% of students and exhaustion in 65% (Table 3).

Discussion

Our study has provided additional data concerning the mental wellbeing of Nepalese medical students. The prevalence of mental health problems using the GHQ-12 in our study was found to be 50%. Studies from Nepal have previously reported a prevalence of anxiety ranging from 32 to 45% and of depression from 29 to 31% among medical students [3, 19, 20]. Our findings are comparable with similar recent studies internationally [6, 7, 25, 26], including a systematic review among medical students in Asia that reported 53% of medical students as being vulnerable to mental health issues [27].

Rates of burnout were very high. Nine out of ten respondents were disengaged and seven out of ten were exhausted. Another Nepalese study showed almost 50% of medical students had burnout syndrome [3]. In a Moroccan study, 90% were exhausted and 70% were disengaged (6) whereas 90% of medical students were at risk of burnout in a UK study [4]. Disengagement and exhaustion scores, however, were lower among Italian students [26]. These results might be due to

Table 2 Health characteristics of our respondents

| Characteristics | Number of students (%) |
|---|------------------------|
| Mental health at baseline (before starting medical school) | |
| Formal diagnosis of a psychiatric illness | 6 (4%) |
| Prescription of psychiatric medication | 9 (5%) |
| Current mental health | |
| Formal diagnosis of a psychiatric illness | 14 (8%) |
| Prescription of psychiatric medication | 5 (3%) |
| Sources of stress | |
| Finance | 49 (29%) |
| Academic study | 109 (64%) |
| Housing | 11 (7%) |
| Relationships | 58 (34%) |
| Alcohol and substance abuse | |
| CAGE positive | 23 (14%) |
| Use of substances to feel better | 15 (9%) |
| Use of performance (e.g., academic) enhancing drugs | 8 (5%) |
| Cannabis use | 15 (9%) |
| Cocaine use | 1 (1%) |
| Opiates use | 2 (1%) |

differences in socio-economic status, educational environment, different levels of competition, and/or different levels of familial support. Burnout and mental health problems were more prevalent in female than male students and this result is similar to previous studies [7]. This may be the result of underreporting of symptoms by men, compared to the female gender [28]. Depression seen in female medical students has been found to be linked with personality traits [29], gender inequality, and stigma [30]. In addition, 64% of our students reported that their academic studies were the leading cause for their stress. This is also in keeping with other published data globally [3, 6, 31].

Nine percent of students had reported a recent or current diagnosis of mental illness, while only 4% had psychiatric diagnosis prior to starting university. This rate seems to be lower than in the UK, where 27% of respondents have been diagnosed with mental illness at some point in their life, with 7% stating that this diagnosis was made in the past year [4].

Table 3 GHQ and OLBI positivity

| | Mean | Number of students screening positive (%) |
|----------------------|------|---|
| GHQ-12 | 3.5 | 85 (50%) |
| OLBI | 2.5 | |
| <i>Disengagement</i> | | 144 (85%) |
| <i>Exhaustion</i> | | 110 (65%) |

Problem drinking was reported by 14% of students. Eleven percent reported illicit drug use, among which 9% had used cannabis. Similar findings are found in other Nepalese studies where 15% students had used cannabis during medical studies. Previous studies in Nepal have reported a similar distribution of alcohol and cannabis abuse, which is aided by the relatively easy availability of cannabis [32].

Conclusions

Our study found that mental health problems are high among Nepalese medical students. Failure to identify these problems leads to increased psychological illness with undesirable effects throughout careers and lives. This study will help stakeholders, including local policy makers, to make further strategic plans to alleviate the mental health problems of students. These strategies could include training for the early identification of stress and its management and making the academic curriculum more “student friendly.” Further research is needed to delineate and categorize the factors associated with psychological distress in medical students globally, in order to appropriately inform policy at local, national, and international levels.

Abbreviations

GHQ: General Health Questionnaire; OLBI: Oldenburg Burnout Inventory; ADHD: Attention deficit hyperactive disorder; ASD: Autism spectrum disorder

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Authors' contributions

AM designed the study, BK and YB collected the data, reviewed literature, and wrote the manuscript. AM and MK analyzed the data and critically revised the manuscript. All authors approved the final version of the manuscript.

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Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

Permissions were sought as appropriate for the survey. The UK NIHR algorithm determined that full ethical approval was not required for this study.

Consent for publication

Not applicable

Competing interests

The authors declare that they have no competing interests.

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