DETERMINANTS OF MENTAL DISTRESS AMONG UNIVERSITY STUDENTS: A NARRATIVE REVIEW OF GLOBAL, REGIONAL, AND LOCAL PERSPECTIVES

Cyrus Mutie[1]*, Isaac William Kyalo[2], Kyania Martin Mulala[2], Kiriba Lucy Njeri[2] & Catherine S. Mutunga Mwenda[3]

Institutional Affiliations:

1 School of Nursing, Jomo Kenyatta University of Agriculture and Technology, Kenya
2 School of Health and Human Sciences, Pwani University, Kenya
3 School of Health Sciences, South Eastern Kenya University
* Corresponding author's E-mail: paulmutiecyrus@gmail.com

Abstract

Background: An upsurge in mental distress among university students has been recorded worldwide. The emergence of COVID-19 has further complicated the mental health and well-being of university students due to frequent lockdowns and disruption of university learning schedules. However, extant literature shows that mental health issues of university students in sub-Saharan African countries including Kenya don't receive equal attention compared to medical health problems. Locally, there is a paucity of studies on mental health among university students. Thus, more studies are needed to address this gap.

Methods: This was a narrative review of peer-reviewed literature published in the last ten years. Literature was mainly searched from the PubMed database, grey literature and the list of references. A total of 18 studies were included in the review after screening for eligibility.

Findings: The globally prevalence of mental health distress is relatively above 75%, with some studies reporting prevalence as high as 95% in the recent past. In sub-Saharan Africa, all studies reviewed have reported a prevalence of mental distress relatively below 50%. In Kenya, studies reviewed have shown that the prevalence of mental distress among university students is below 40%. Female gender, substance use, lack of social support, early years of university education, and poor grades in exams have been overwhelmingly cited as the key determinants of mental distress among university students.

Conclusion: Currently, the actual situation of mental distress among university students in Kenya is unknown. This study recommends effective intervention treatment trials to establish which interventions can work best in reducing students' mental health problems in Kenya. There is a need for student-centred drop-in-centres to provide social support, and counselling, and create extensive mental health awareness among university students. Universities should conduct frequent surveys on mental health problems affecting students and institute remedies as needed.

Keywords: prevalence, distress, mental health, university students, global, sub-Saharan Africa, Kenya

INTRODUCTION

Mental distress is the deviation from a normal performance of mental functions like thinking, emotional coping, and adaptation to change (Sadock et al., 2017). Mental distress may be characterized by anxiety, depression, or stress among many other signs and symptoms (de Waal et al., 2005). When left unattended, mental distress may negatively impact an individual's productivity in daily life (Ebert et al., 2019; Yu et al., 2022). Evidence shows that mental health problems as well as their determinants, do not receive equal attention as medical health problems do (Porru et al., 2021). This is so, especially among university students from developing countries. Therefore, more research is needed to develop targeted mental distress management interventions among university students.

The timing of university education coincides with the developmental phase of transitioning to adulthood and exposure to a new world among many students (Dachew et al., 2015; Dessie et al., 2013; Tessema et al., 2022). At this time, without the much-needed close support of their immediate families, most students are prompted with demands of performance in assignments and exams, new social networks, new lifestyles, peer pressure, and lack of social support (Dachew et al., 2015; Dessie et al., 2013; Tessema et al., 2022). Thus, the prevalence of mental distress is higher among university students compared to the general population (Campbell et al., 2022; Chen & Lucock, 2022; Dachew et al., 2015; Mahgoub et al., 2022; Siraji et al., 2022; Yu et al., 2022). More recently, the emergence of COVID-19 is understood to have disrupted the psychological well-being of university students (Schmits et al., 2021). Consequently, an upsurge in mental distress incidences was widely observed (Schmits et al., 2021).

Locally, there is limited evidence of mental distress among university students. Thus, the current study sought to gain a deeper understanding of the prevalence and determinants of mental distress among university students, especially in Kenya. The goal is to chart a pathway through which a larger study may be conducted in the future. Indeed, the current study is instrumental in informing policy improvement and practices aimed at addressing mental health issues not

only in Kenya but also in other developing nations.

MATERIALS AND METHODS

Search strategy

This was a narrative review involving the search of peer-reviewed literature published in the last ten years between 2012 and 2022. Literature was mainly searched from the PubMed database. Moreover, grey literature was searched from Google Scholar and PhD theses. Additional studies were identified from the list of references of the retrieved studies. The search involved both full-text literature and abstracts. The search string from PubMed included; ("mental distress" OR "mental health problems" OR "mental disorders" OR "anxiety" OR "depression" OR "psychological distress" OR "psychosocial distress") AND ("university students" OR "college students") AND (prevalence) AND ("determinants" OR "correlates" OR "predictors"). The research string returned the following result; ("mental distress"[All Fields] OR "mental health problems"[All Fields] OR "mental disorders"[All Fields] OR "anxiety"[All Fields] OR "depression"[All Fields] OR "psychological distress"[All Fields] OR "psychosocial distress"[All Fields]) AND ("university students"[All Fields] OR "college students"[All Fields]) AND ("epidemiology"[MeSH Subheading] OR "epidemiology"[All Fields] OR "prevalence"[All Fields] OR "prevalence"[MeSH Terms] OR "prevalance"[All Fields] OR "prevalences"[All Fields] OR "prevalence s"[All Fields] OR "prevalent"[All Fields] OR "prevalently"[All Fields] OR "prevalents"[All Fields]) AND ("determinants"[All Fields] OR "correlates"[All Fields] OR "predictors"[All Fields]). This approach enabled the researcher to locate the problem's magnitude from global, regional and local perspectives. The search strategy identified 624 articles, out of which 18 were included in this review. Figure 1 shows the sequence of the literature search followed for this study.
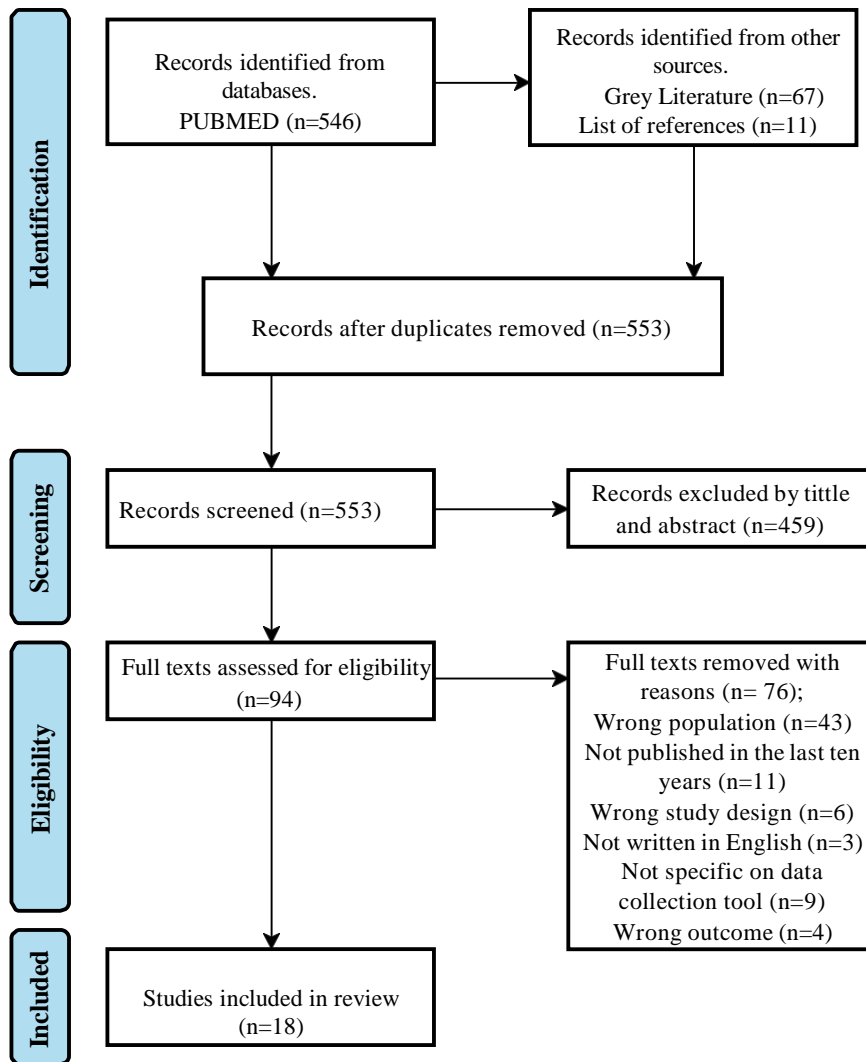
Figure1: Flowchart for the narrative review

Screening for inclusion and exclusion criteria

Studies were screened for inclusion and exclusion in three steps using the Rayyan software for systematic reviews (Ouzzani et al., 2022). Step one involved the removal of duplicates. This was followed by the screening of titles and abstracts based on relevance as per the inclusion and exclusion criteria. Lastly, full texts were retrieved and assessed for eligibility based on a pre-determined criterion as indicated in Table 1.

Table 1: Study Inclusion and Exclusion Criteria

Inclusion	Exclusion
Condition Studies reporting the prevalence of mental distress and its determinants among university students.	Studies reporting the prevalence of mental distress and its determinants among other student populations besides university students. Studies not specific on the mental health outcome among university students. Studies reporting on other parameters besides the prevalence and mental distress among university students.
Context Studies done from all parts of the world. Studies written in English. Studies which are specific on the data tool used. Studies published in the last ten years.	Studies not specific on the place where the outcome occurred. Studies written in other languages besides English. Studies not specific on the data collection tool used. Studies published more than ten years ago.
Population Studies reporting on university students at various levels of studying.	Studies not specific on the level of studying among the university students. Studies reporting on other types of students besides university students; like high school students.

Data extraction

The following data were extracted from the full articles retrieved for the narrative review; author and year of publication, study design, sample size, prevalence, determinants of mental distress and recommendations listed in the specific studies. The extracted data was stored in a Microsoft Excel data abstraction form. Later, the data were thematically organized and placed into global, regional and local perspectives as indicated in Table 2. A brief narrative on the same is also presented.

Data synthesis

The findings of different studies included in the review were qualitatively interpreted and

discussed. The implications (for practice and policies) of different study findings, gaps, as well as potential interventions, are presented. Lastly, the conclusion and recommendations for future research are given.

RESULTS

Globally, mental distress among university students hit the highest prevalence in the recent past. For instance, in Italy, a recent study established a prevalence of 78.5% in psychological distress among university students (Porru et al., 2021). In the same study, female students were more likely to be diagnosed with a mental health problem than their male counterparts (Porru et al., 2021). Elsewhere in Australia, an estimated 95% of university students were found to suffer from psychological distress (Nieuwoudt, 2021). A survey looking into the prevalence of mental disorders among international university students in the US discovered that about 93.7% of those interviewed had at least one type of mental disorder (Karyotaki et al., 2020). All 493 health sciences university students interviewed in a study done in Brazil were found to suffer from one form of mental anxiety (Alves et al., 2021). Of the 493

students, about 65.7% of them were already undergoing treatment for mental health disorders (Alves et al., 2021). Having suffered psychological trauma in childhood, having a deceased parent, and having suicidal thoughts were linked to mental distress (Alves et al., 2021). A systematic review established that the prevalence of depression, anxiety, and stress was 29.4%, 42.4%, and 16.4% respectively, among South Asian university students (Dessauvagie et al., 2022).

In sub-Saharan Africa, several studies have been conducted to establish levels of mental distress among university students. For instance, a study established a prevalence of 14% mental distress in Tanzania (Mboya et al., 2020). Staying outside the campus and perceived availability of social support reduced the likelihood of being diagnosed with mental distress among university students (Mboya et al., 2020). A family history of mental distress and poor performance were linked with high chances of being diagnosed with mental distress (Mboya et al., 2020). In Northern Ethiopia, the prevalence of mental distress among university students was estimated to be 53.2% (Tesfaye Kelemu et al., 2020).

Female gender, sleep quality and use of Khat emerged as the key determinants of mental distress (Tesfaye Kelemu et al., 2020). In Somalia, a study established a prevalence of 19.8% mental distress among university students (Hersi et al., 2017). Lack of a satisfying relationship with family and friends, female gender, and lack of adequate funds were reported as predictors of mental distress among the students interviewed (Hersi et al., 2017). Elsewhere in Ethiopia, a study established a prevalence of 34% mental distress among university students studying health sciences (Bedaso et al., 2020). Inadequate social support and substance use were reported as the key predictors of mental distress among the study participants (Bedaso et al., 2020). Moreover, a different study done in Ethiopia established a prevalence of 17.6% mental distress among university students (Siraji et al., 2022). Lack of close friends, poor grades, lack of social support and lack of pocket money emerged as key predictors of mental distress among the students interviewed (Siraji et al., 2022). In Capetown South Africa, the prevalence of mental distress among university students was found to be 53.3% (Mutinta, 2022). Female gender, poor sleep quality and substance use were established as key determinants of mental distress (Mutinta, 2022).

In Kenya, a study established a prevalence of 35.7% and 5.6% of moderate and severe depression respectively, among university students (Othieno et al., 2014). More recent studies have documented a prevalence of mental distress of 33% and 35.4% in the same population (Ali et al., 2022; Ndegwa, 2020).

Those who were economically disadvantaged, being a first-year student, academic performance, alcohol and substance use merged as risk factors for depression (Othieno et al., 2014). Poor socio-economic background, early years of study, and lack of social support have also been implicated as determinants of mental distress among university students (Ndegwa, 2020). A summary of the literature reviewed is given in Table 2.

Table 2: Summary of key studies reviewed

Author and Year	Design	Sample size	Prevalence (%)	Determinants of mental distress	Recommendations
GLOBAL					
Porru et al., 2021	Cross-sectional	4760	78.5	• Female gender • Effort reward-imbalance • Over-commitment	• More longitudinal studies. • Reduce over-commitment and effort-reward imbalance
Nieuwoudt, 2021	Cross-sectional	687	95	• Young Age	• Enhance resources on mental well-being. • Sensitize and create awareness among educators on identifying and handling mental distress among students
Karyotaki et al., 2020	Cross-sectional	20,842	93.7	• Prolonged duration of stress	• Reduce stressors among students
Auerbach et al., 2018	Cross-sectional (web-based	13984	35	• Unmarried • Female genders • No religious affiliation • Older age • Deceased parents	• Establish mental healthcare structures within universities to address the mental health needs of students
Beiter et al., 2015	Cross-sectional	374	40	• Pressure to succeed • Academic performance • Post-graduation concerns • Financial concerns • Body image • Overall health • Self-esteem	• Universities should set systems to monitor mental health problems among students. • Universities should conduct frequent surveys on mental health problems affecting students and institute remedies as needed
Bruffaerts et al., 2018	Cross-sectional	4921	34.9	• Early years of university education.	• Modify the university environment to suit the emotional needs of students • Conduct effective intervention treatment trials to establish which interventions can work best in reducing students' mental health problems
Alves et al., 2021	Cross-sectional	493	79.9	• History of psychological/physical violence in childhood • Deceased parent • Living with parents • Suicidal thoughts • Dissatisfaction with course • Exam duration	• Address social issues like family problems among students • Student counselling on career courses to enhance satisfaction
Dessauvagie et al., 2022	Systematic review		29.4 (depression) 42.4 (anxiety) 16.4 (stress)	• Substance use • Poor performance • Problems with friends, family • Low socioeconomic status	• Need for targeted mental health services for students • A holistic approach to mental health preventive and promotion strategies • Mechanisms to provide peer support among students and lecturers

• **SUB-SAHARAN AFRICA**					
Mboya et al., 2020	Cross-sectional	402	14	• Family history of mental distress • Lower grades than anticipated • Perceived availability of social support	• Establish student-centred drop-in-centres in the universities to offer psycho-social counselling, support and awareness creation on mental health problems
Tesfaye Kelemu et al., 2020	Cross-sectional	422	53.2	• Female gender • Sleep Quality • Use of khat	• Need for evidence-based intervention strategies like sleep hygiene, peer support, and self-help measures
Hersi et al., 2017	Cross-sectional	570	19.8	• Female gender • Use of khat • Low socio-economic status • Lack of a satisfying relationship with family	• Need for targeted interventions for groups affected by mental health problems like female students
Bedaso et al., 2020	Cross-sectional	311	34	• Substance use • Poor social support	• Need for mental distress attention from policymakers, families and students
Siraji et al., 2022	Cross-sectional	408	17.6	• Lower than expected grades • Social conflicts (from friends) • Use of Khat • Lack of pocket money	• Need for tailored interventions targeting different circumstances like substance use, social support
Mutinta, 2022	Cross-sectional	844	53.3	• Year of Study • Use of cannabis • Female gender • Sleep Quality • Workload	• Need for interventional programs targeting female students, those in STEM fields • Need for evidence-driven interventions • Make sure students have access to professional mental health services
• **KENYA**					
Othieno et al., 2014	Cross-sectional	923	Moderate depression (35.7) Severe depression (5.6)	• Being a first-year student • Being married • Staying off-campus • Economically disadvantaged.	• Need for interventions to address mental distress, with a close focus on those at risk
Mugendi, 2021	Cross-sectional	229	Moderate distress (42.4) Severe distress (11.4)	• None	• None
Ndegwa, 2020	Quasi-experimental	852	33	• Female gender • Year of Study • Age • Low socio-economic background • Lack of social support	• Universities should provide psychological support to students • Create awareness of risks of mental distress among university students • Provide social skill training among university students to enhance their coping skills to risks of depression
Ali et al., 20221		100	35.4	• Direct involvement in the care of COVID-19 patients.	• None

DISCUSSION

This narrative review has pointed to a high prevalence of mental distress among university students from across the globe. Certain themes and patterns have emerged from various studies, with key differences in mental distress being noted from studies conducted outside sub-Saharan Africa. Therefore, this section will unravel the findings with a particular emphasis on gaps, implications, and potential interventions.

The current study has identified a higher prevalence of mental distress among university students across all studies done globally (outside sub-Saharan Africa) (Alves et al., 2021; Dessauvagie et al., 2022; Karyotaki et al., 2020; Nieuwoudt, 2021; Porru et al., 2021) compared to the trends within sub-Saharan Africa (Hersi et al., 2017; Mboya et al., 2020; Mutinta, 2022; Siraji et al., 2022) and in Kenya (Ali et al., 2022; Ndegwa, 2020; Othieno et al., 2014). This may point to underreporting of mental distress within sub-Saharan Africa. The smaller number of studies done recently on mental distress among university students in sub-Saharan Africa and Kenya compared to the global level may indicate that the actual levels attributable to COVID-19 are being missed, thus the variations in the reported prevalence. Moreover, the fact that overseas universities attract a significantly large number of international students compared to those in sub-Saharan Africa may partially explain the finding. It is expected that students studying far away from their families may lack adequate social support hence mental distress. Inadequate social support from family has been linked to mental distress in previous research (Dessauvagie et al., 2022; Mboya et al., 2020; Siraji et al., 2022). Therefore, more studies are needed to consolidate the body of evidence on mental distress among university students in sub-Saharan Africa and Kenya.

Female gender has prominently emerged as a risk factor for mental distress among university students from many of the studies reviewed (Auerbach et al., 2018; Hersi et al., 2017; Mutinta, 2022; Porru et al., 2021; Tesfaye Kelemu et al., 2020). This highlights the possibility of underlying mental distress predisposing factors that are unique to female students compared to their male counterparts. For instance, hormonal fluctuations during menses, social bias, and the low rank of women in society may partly

explain this finding (Tesfaye Kelemu et al., 2020). Indeed, documented evidence asserts that women in the general population suffer more mental health problems than men (Sandanger et al., 2004). Another school of thought would postulate that females are more likely to recognize and acknowledge when they have a mental health problem and eventually seek psychosocial support unlike their male counterparts (Marwood & Hearn, 2019). In contrast, a different study found that university students of the male gender were more likely to develop mental distress than their female counterparts (Mahgoub et al., 2022). Therefore, there is a need for targeted gender-specific mental health interventions, which seek to address gender-based predisposing factors among university students. Moreover, universities should establish safe spaces like drop-in-centres where students can seek mental health support without feeling judged by their peers.

Substance use has been extensively implicated as a significant determinant of mental distress among university students (Bedaso et al., 2020; Dessauvagie et al., 2022; Hersi et al., 2017; Siraji et al., 2022; Tesfaye Kelemu et al., 2020). Studies have shown a synergistic link between mental distress and substance use (Buckley, 2007; Smith et al., 2017). This means that people with mental distress tend to find temporary solutions to substance use as a way. On the other hand, substance use has the potential to induce mental distress among individuals. We may also argue that substance use can cause sleep deprivation, cause absenteeism, leading to poor academic performance hence mental distress (Bedaso et al., 2020). Moreover, substance use may be a coping strategy for students to survive the hard academic demands of the university, eventually predisposing them to mental distress (Hersi et al., 2017). This finding highlights the need to control and eliminate substance use among university students. Therefore, universities should set up mechanisms through which screening of substance use is done frequently among students. It is worth noting that substance use has the potential to ruin the lives of young people given its related long-lasting side effects. For instance, substance abuse has been linked to risky sexual behaviors among young adults, leading to unfavorable outcomes like early pregnancies and

sexually transmitted infections like HIV (Doku, 2012; Mutie et al., 2021).

Lack of family or social support has been widely cited as a significant predictor of mental distress among university students (Alves et al., 2021; Bedaso et al., 2020; Dessauvagie et al., 2022; Mboya et al., 2020; Siraji et al., 2022). This underscores the need for mechanisms that enhance social cohesion and interrelationship strengthening among university students. Indeed, strong interrelationships among university students have the potential to create a strong social fabric through which their mental health needs are identified and attended to. Moreover, research recommends enhancing co-curricular activities among university students to enhance social support through interrelationships among them (Bedaso et al., 2020).

Evidence postulates that early years of university education is a strong predictor of mental distress among university students (Bruffaerts et al., 2018; Mutinta, 2022; Nieuwoudt, 2021; Othieno et al., 2014). Universities present a new environment with enhanced roles and reduced family support to many students hence the finding. Additionally, students may be prompted

with new performance demands to keep afloat the competitive university requirements. Failure to meet these demands, students may be discontinued, which will have eventual economic losses to their parents or guardians. In such an environment, many students find themselves operating in fear, and later develop distress (Bruffaerts et al., 2018). Moreover, peer pressure to fit into certain social networks may lead new-year students into mental distress. Therefore, universities should set up mental health interventions that specifically target the needs of students in the early years of university education.

Lower than anticipated exam grades has been significantly cited as a predictor of mental distress among university students (Beiter et al., 2015; Dessauvagie et al., 2022; Mboya et al., 2020; Siraji et al., 2022). When students join universities, they are always ambitious to score record-high grades for their future progress in academia. However, universities may end up being very competitive, unlike their initial schooling levels. Moreover, some university curriculum content may be too complex for the average student to navigate. Thus, when students have their dreams eclipsed by the

competitive university environment, they develop mental distress. Consequently, universities should establish support systems for weak students, as well as encourage them to seek the support of their peers and lecturers in academia.

Therefore, the groups discussed above, among many others at risk of mental distress should be targeted with focused interventions that address their specific mental health risks. More research is needed to identify and address the real mental health issues affecting university students, particularly in sub-Saharan Africa and Kenya.

While almost all studies reviewed in this section recommended evidence-based interventional studies to address the mental health needs of university students, almost all were cross-sectional. This means that the right interventions that can effectively address the mental health needs of university students are unknown. Moreover, sub-Saharan African studies and those done in Kenya, have been shown to constitute smaller sample sizes than those done at the global level. Smaller sample sizes may lack accurate representativeness of the actual scenario in the larger university student

population. It was noted that some studies focused on specific groups of students depending on courses taken or years of study. This implies that the holistic view of mental health issues affecting university students in such scenarios may be missed. The researcher has identified that very few studies are being conducted in Kenya regarding mental health issues affecting university students, thus, the need for more research.

Limitations

The studies reviewed here were mainly from open-access sources like PubMed owing to limited resources to access information from subscription-based databases. Thus, some relevant studies that could enhance the findings of this review may have been missed. The literature reviewed in the current study was restricted to the prevalence of mental distress and its determinants among university students. Therefore, other aspects of mental health among university students may have been missed. Some material used in this study may not have been peer-reviewed, hence the lack of the required scientific rigour. Additionally, given that studies reviewed were only those written in English, a lot may

have been missed from those written in other languages.

CONCLUSION

Currently, the situation of mental distress among university students in Kenya is unknown. The prevalence of mental distress among university students in sub-Saharan Africa and Kenya is lower than what has been reported globally. Female gender, early years of university education, substance use, and poor or lack of social support among other factors are the determinants of mental distress among university students. Consequently, universities should establish tailored interventions targeted at the above mental health risks among their students.

Recommendations

This study recommends effective intervention treatment trials to establish which interventions can work best in reducing students' mental health problems in Kenya. Universities should set up student-centred drop-in centres to provide social support and counselling and create extensive mental health awareness among students. There is a need to establish or improve existing professional mental services available to students in universities. Universities should conduct frequent surveys on mental health problems affecting students and institute appropriate remedies. Mental health problems among university students should be conducted holistically, such that all mental health concerns of diverse student groups are identified and addressed.

Conflict of interest

The authors declare no conflict of interest.

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