

Mental Distress And Its Determinants Among Debre Berhan University Students, Northern Shewa, Ethiopia

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Abstract

Background: Mental distress is a serious problem affecting people all over the world with different status. Reports have shown a significantly high level of psychological distress (PD) among students than their community peers. This study aimed to determine the prevalence of mental distress and associated factors among Debre Berhan university students (DBU).

Methods: Institution based cross-sectional study was employed to determine the prevalence and associated factors of mental distress among undergraduate students of DBU. Data on the magnitude of mental distress were collected using self-administered structured 20 items Self-Reporting Questionnaire (SRQ-20). A Cutoff point of 8 was used to determine the presence of mental distress. Multiple logistic regression was conducted to identify factors associated with mental distress and variables with P-value < 0.05 were considered statistically significant.

Result: A total of 612 students participated in the study which yields in a response rate of 96.5%. Out of the total participants, 358 (61.3%) were males and majority 558 (91.2%) of the participants are between 18 and 23 years of age. Three out of ten students were found to be a victim of mental distress in the study area based on the World Health Organization 20 items Self-Reporting Questionnaire (SRQ-20) assessment. After adjusting for possible confounders, female student [AOR= 2.45, 95% CI 1.41, 4.27], lack of interest in their department [AOR=2.95, CI, 1.257, 3.19], conflict with fellows [AOR= 3.15, 95% CI, 1.98, 5.9], Not visiting a religious place [AOR= 2.45, 95% CI, 1.41, 4.27] and current use of Alcohol [AOR= 2.4 95% CI, 1.19, 4.87] were found to be factors statistically associated with mental distress.

Conclusion: More than one-quarter of students had mental distress. The likelihood of having mental distress was higher among females, those who do not attend a place of worship, having a conflict with fellows, not having the interest to be rolled in their department and students recently using alcohol. Therefore, students, especially females, need psychological support, and universities need to strengthen the clinical setup and functional referral linkage with mental health institutions.

Keywords: Mental distress, Student, University, Debre Berhan, Ethiopia

Introduction

Mental distress is a mental health problem that is presented with various levels of depressive, anxiety, panic and somatic symptoms such as sleep problems, headache, backache, confused emotions, hallucination, and other related symptoms without the usual sense of medical illness [1,2]. Individuals who are afflicted of mental distress can have problems in the way they think sense or act [3]. Nowadays, mental

distress becomes one of the concerning public health, and it is a leading cause of disability attributed to one-third of disability-adjusted life years (DALYs) worldwide [4,5] and in Ethiopia mental disorders account for 11% of the total burden of diseases [6].

Students of higher institutions constitute one of the specific high-risk groups for mental distress because of the extra burdens and worries they face compared with the regular community. Even though the experiences of students often seem exciting and refreshing, it can also be demanding and may produce various forms of psychopathology [7]. Mental health problems can have a significant impact on students' academic performance. At the individual level, these conditions can influence all aspects of students' life, and also it can affect their physical, emotional, cognitive and interpersonal functioning [8].

As shown by studies in various developed nations, 57% of students in the USA, 53% of students in Australia, 25.7% of students in France, 22.9% of students in Norway and 22.5% of students in Iceland have experienced mental distresses [9-13]. Though, not as concerning as high-income countries, alarmingly higher rate of mental distress has been reported in lower- and middle-income countries like Brazil 44.7%, Malaysia 41.9% and Kenya 10.8% [14-16].

Ethiopian studies conducted at Hawassa, Gonder, Mizan universities have also shown a significant proportion of mental distress among students [17-19]. Regardless of the national health policy of Ethiopia comprising of mental health problem, the actions taken against the problem are inadequate, and lack of much information about the problem is a contributing factor for unfortunate mental health services [20]. Substantiation from epidemiological s shows the need for covering the burden of mental health problems in students over time.

Therefore, this study is aimed to determine the prevalence of mental distress and identify the associated factors for mental distress among DBU students.

Methods and materials

Study design and setting

An institution-based cross-sectional study was employed to determine the prevalence and associated factors of mental distress among undergraduate students of DBU. DBU is found in Debre Berhan town which is located 130 KM away from Addis Ababa, the capital city of Ethiopia, to the Northeast direction. Today the university has more than 10,000 students in nine colleges. The study was conducted from May to June 2017.

Sampling procedure and participants

The participants of this study were undergraduate regular students enrolled in the academic year 2016/2017 and attending classes in the regular program. The sample size (633) was determined by a single population proportion formula with the assumptions of 95% level of confidence, 5% margin of error, 49% prevalence of mental distress [17], 10% non-response rate and 1.5 design effects. The final sample size had been allocated proportionally for each of the selected colleges.

Data collection and quality control

The data were collected using a structured self-administered questionnaire dealing with issues related to socio-demographic,

behavioral, social variables, and magnitude of mental distress. Students were identified as mentally distressed using the standard World Health Organization 20 items Self-Reporting Questionnaire (SRQ-20) [21]. The tool has been validated for its applicability at different lower- and middle-income countries [22,23]. The score of 8 has been used as a cutoff point to determine the presence of mental distress, and this value has shown a good sensitivity (84%) and specificity (86%) for the detection of mental distress [22]. Before the dissemination and collection of data, a pre-test was done on 5% of the total sample size in Debre Berhan health Science College and necessary modification were made. Two supervisors (BSc Psychiatry Nurses) and six (Diploma Nurses) were employed and trained for two days about the purpose of the study and overall data collection procedure. Principal investigators examined the completeness, consistency, and accuracy of the collected data.

Data processing and analysis

Data were checked, coded and entered in EPI INFO version 7 then exported to SPSS version 20 for analysis. Both descriptive and analytical statistical procedures were utilized. Binary logistic regression was applied to identify factors associated with mental distress and variables with P-value of less than 0.25 was considered a candidate for multivariate analysis. Multiple logistic regression models were fitted to control the possible effect of confounders, and finally, the variables which had an independent association with mental distress were identified based on AOR, with 95%CI and p-value less than 0.05.

Operational definition

Mental distress

For this study, a student who scores 8 or more from SRQ-20 was considered as mentally distressed.

SRQ-20

Items are scored 0 [No] or 1 [Yes]. A score of 1 indicates that the symptom was present during the past month; a score of 0 indicates that the symptoms were absent. The maximum score is, therefore, 20. In this study, students that will be found to have MD if he or she scores 8 or more symptoms of the 20 items self-reporting questionnaires (SRQ-20) within the last four weeks preceding the survey.

Results

Socio-demographic characteristics

A total of six hundred and twelve students were studied, which resulted in a response rate of 96.5%. More than half 358(61.3%) of participants were males. Respondents' age ranged from 18 to 39 years, with a mean (Standard Deviation) age of 21.4 (\pm 2.6). Higher percentages 368(60.1%) of the participants were from an urban background. Majority of the participants (68.3) were followers of Orthodox religion, followed by Muslims (16.9%) (Table 1).

Table 1: Socio-demographic and academic characteristics of students of DBU, Ethiopia 2017.

Variables	Frequency	Percentage
Sex		
Male	358	61.30%
Female	254	38.70%
Age		
18-23	558	91.20%
24-29	37	6%
30-35	14	2.30%
>35	3	5%
Religion		
Orthodox	418	68.30%
Muslim	104	16.90%
Protestant	83	13.50%
Others ^a	7	1.10%
Residence		
Urban	368	60.10%
Rural	244	39.90%
College		
Law	195	32%
Health science	209	34.10%
Agriculture	208	33.90%
Year of Study		
1 st year	225	36.80%
2 nd year	138	22.50%
3 rd year	152	24.80%
\geq 4 th year	97	15.90%
Joined department by preference		
Yes	510	83.30%
No	102	16.70%
Interest in their department		
Interested	487	79.60%
Not Interested	125	20.40%

^aCatholic, Adventist

Social and behavioral characteristics

Four hundred and fifteen (67.8%) students stated that they are bearing a higher expectation of good academic achievement from their parents. There was a report of chat chewing by about 74 (12.1%) of participants, and 105 (17.2 %) of them admitted the current use of alcohol. More than one-quarter (31.7%) of students reported a serious conflict incident with their fellows. Only twelve percent of students had never attended a place of worship in their university stay so far. A small 53 (8.6%) proportion of participants reported a family history of any form of confirmed mental illness (Table 2).

The magnitude of mental distress and associated factors

Prevalence of mental distress using SRQ-20, with a cutoff point of 8

and above was found to be 29.7% (CL: 23.2%, 34.5%) among participating students (Table 2). Relatively high prevalence of mental distress was found among female 36.6% students as compared to male 24.8% [AOR= 2.45, 95% CI 1.41, 4.27]. There was a statistically significant association between lack of interest in their department [AOR=2, 95% CI, 1.257, 3.19] and presence of mental distress. History of conflict with fellow had resulted in three times [AOR= 3.15, 95% CI, 1.98, 5.9] increased odds of having mental distress. Visiting a religious place for worship was one of the predictors for mental distress, as students who did not visit religious place had higher [AOR= 2.45, 95% CI, 1.41, 4.27] chance of having mental distress compared to students who did. Current use of Alcohol had resulted increased [AOR= 2.4 95% CI, 1.19, 4.87] chance of developing mental distress (Table 3).

Table 2. Social and behavioral characteristics of students of DBU, Ethiopia 2017.

Variables	Frequency	Percentage
Parent's expectation on academic achievement		
High	415	67.80%
Moderate	189	30.90%
Low	8	1.30%
Support from campus society		
Strong	218	35.60%
Moderate	309	50.40%
Low	85	14%
Current Khat use		
Yes	74	12.10%
No	538	87.90%
Current Alcohol use		
Yes	105	17.20%
No	507	82.80%
Current Cigarette use		
Yes	53	8.60%
No	559	91.40%
Close friend/accompany		
Yes	503	82.20%
No	109	17.80%
Serious conflict with fellows		
Yes	194	31.70%
No	418	68.30%
Separation Anxiety (From family)		
Yes	273	44.70%
No	337	55.20%
Frequency of attending place of worship		
Daily	203	33.20%
2-3 times per week	176	28.70%
One's a week	89	14.40%
Less than weekly	67	10.90%
Never	77	12.60%
Family history of mental illness		
Yes	53	8.60%
No	559	91.30%
Presence of Mental Distress		
Yes	182	29.70%
No	430	70.30%

Table 3. Factors associated with mental distress among DBU students, Ethiopia, 2017.

Variables		Mental Distress		COR (95% CI)	AOR (95% CI)
		Yes	No		
Sex	Male	89	269	1	1
	Female	93	161	1.74(1.23,2.47) **	2.45(1.41,4.267) **
Conflict with fellows	Yes	108	86	5.84(3.99,8.52) *	3.145(1.98,5.90) *
	No	74	344	1	1
Interest in academic dep't	Yes	54	71	1	1
	No	128	359	2.133(1.42,3.21) *	2.002(1.26,3.19) **
Current use of Alcohol	Yes	58	47	3.63 (2.35, 5.60) *	2.405(1.19,4.87) *
	No	125	382	1	1
Frequency of worship attendance	Daily	25	178	1	1
	2-3 times per week	17	159	0.018(0.007,2.043)	0.42 (0.21,2.75)
	One's a week	11	78	0.02 (0.009,2.044)	0.352 (0.189,5.74)
	Less than weekly	60	7	1.06(1.501,2.249) *	4.63(0.856,5.890)
	Never	69	8	1.61 (1.826,3.131)	5.36(1.490,5.890) *

* p < 0.05; ** P<0.01; 1= Reference; COR= crude odds ratio & AOR= adjusted odds ratio

Discussion

The prevalence of mental distress among students was found to be 29.7 % in the current study. This finding is lower contrary to studies in Australia (57%) and Brazil (44.7%). The distinction could be ascribed to the socio-cultural difference among the study participants and environmental factors [10,14]. Comparing the finding with studies conducted in Ethiopia [17,18], the result of the present investigation has been observed to be lower. This may be because of time variation; the change in foundation, administration, and service options offered by school experts. On the other hand, the prevalence in the current study was higher when compared with studies in France, Norway (22.9%), Iceland (22.5%), German (19.2%) and Adama [24-26]. This infers, the issue still requires a genuine consideration regarding the reduction of the impact of mental issues among productive populations.

In agreement with past reports [12,14,24,27], the current study found a significant association between female sex and the development of mental distress. The compelling nature of their reaction to stress, abusive behavior at home, and hormonal changes could be the conceivable reasons for the higher pervasiveness of mental distress among female students. Correspondingly, the prevalence of mental distress is high on those students who do not attend a place of worship (AOR 4.63 95% CI 1.86, 5.89). This finding is steady with reports from Hawassa University and Adama University [17,26]. This could be because of religious lessons and advises offered to help in stress management as well as the encouragement to expand the versatile practices of a person's life [28,29].

Friendship is among the most valuable relationships people have, and it is a crucial element in protecting our mental health. Having close friends can help with people's ability to cope with the problems. The prevalence of mental distress is higher in those students who do not have close friends. The finding is consistent with a study in Gonder University and Adama University [18,26]. Likewise, the study revealed that students who were not interested in their field of study were two times more likely to experience mental distress as compared with those who were interested in their department. The result is almost the same as other studies in Ethiopia [18,26].

Moreover, there is a well-identified relationship between substance utilization and mental disorder [30]. The current study revealed that regular intake of alcohol was found to be a critical indicator of mental distress. Students whoever use alcohol were three times more likely to have mental distress as compared to students who never use. This may be because substance use leads to disorganization in liver function, damaged relationship, and sleep difficulty.

Conclusion

More than one-quarter of students were found to have mental distress based on the standard Self-Reporting Questionnaire (SRQ-20). The likelihood of having mental distress was higher among females,

those who do not attend a place of worship and those who attend less than weekly, not having close friends, having a conflict with fellows, not having an interest to be rolled in their department and used alcohol. Strengthening the clinical setup and establishment of proper referral linkage with mental health institution would lessen the effect of mental disorder among the student population with special consideration to female students. Further study with a more valid instrument and advanced design covering other range of samples is essential to substantiate this finding for more generalizability.

Limitation of the study

Causality cannot be inferred due to the cross-sectional nature of the study. Social-desirability bias might be added as well. The external validity of the result might be limited as the study included a student of a single university.

Ethical approval and consent to participate

Ethical clearance was obtained from the Ethical Review Committee of the Institute of Medicine and Health Science, University of Debre Berhan. The respondents were informed about the purpose of the study and written informed consent was obtained from the study participants. Information is obtained kept Anonymous.

Authors' contributions

YR, BN, and YG conceived and designed the study. MA, MT, and KW supervised the data collection, YG, BN and YR performed data analyses and interpretation, and MT and KW prepared the manuscript. MA, YG, and YR revised the manuscript and provided intellectual feedback. All authors read and approved the final manuscript.

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