

Prevalence and Factors Associated to Depression Among Ambo University Students, Ambo, West Ethiopia

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Abstract

Background

Depression among university students is extremely prevalent and wide spread problem across the world (1,2). University students are special group of people that are during a critical transitory period in which they are going from adolescence to adulthood and can be one of the most stress full times in person's life. As a reaction trying to fit and maintaining good grades, plan for the future and be away from home some students get depressed (4 &5). The average age of on set is also on the decline, making depression a particularly silent problem area for university student populations (6). The purpose of this study was to estimate the prevalence of depression and its associated factors among Ambo university students by using CESD's questioner to measure depression.

Results

The purpose of this study was to estimate the prevalence of depression and its associated factors among Ambo university students by using CESD's questioner to measure depression. The study result showed that among the study participant 32.2% were depressed. Being female is Four times more likely to be depressed when compared with male (AOR 4.02, 95%, C/I 1.22, 4.03), current use of Khat is three times more likely to be depressed (AOR 3.05, 95%, C/I 2.05, 6.02), Being first year student when compared with the academic year is three times more likely to be depressed (AOR 3.00, 95%, C/I 3.02, 7.25).

Methods

Institution based cross-sectional quantitative study design involving the administration of English version of the pre-tested structured self-administered questionnaire was used to collect information Depression prevalence and factors associated to it. The source population was stratified based on their year of study. The study population was selected using simple random sampling technique.

Conclusion

The prevalence of Depression in this study was high compared to study done at Jimma University, Ethiopia and Iran but lower when compared to study done at Michigan University, America. In this study being Female was associated to depression; Current user khat and being first year student.

Recommendation: Ambo University should create awareness about the effect of psychoactive substance like Khat since it can cause depression and also help first year students to adapt to the new environment because they separated from their family and previous environment.

1. Background

1.1. Statement of the problems

Depression is a state of low mood and aversion to activity that can affect a person's thoughts, behaviours, feelings and sense of well-being. Depressed people may feel sad, anxious, empty, hopeless, worried, helpless, worthless, guilty, irritable, hurt or restless. They may loss interest in activities that once were pleasurable, experience loss of appetite or over eating, have problems of concentrating remembering details, or making decision and may contemplate or attempt suicide. Insomnia, excessive sleeping, fatigue, loss of energy or aches, pains or digestive problems that are resistance to treatment may also present (24).

In Ethiopia mental health has been one of the most disadvantaged health programme both in terms of facilities and trained man power, however during the last decade, encouraging effort has been taken to expand service throughout the country. Recognizing the need to scale up mental health service, the Ethiopian Government has shown political commitment to the successful implementation of the mental health GAP action (mhGAP) programme supported by the foundation d, Harcourt and European commission. Regarding human resource there are 36 psychiatrists and more than 400 psychiatry nurse (21).

The prevalence of depressive symptoms varies across different population. Specially, depressive symptoms are frequent among university students all over the world and their prevalence appears to be increasing. The period of youth is a time of contradictions when a person goes through many changes and experiences such as emotional, behavioral, sexual, economic, academic and social and as well as efforts of discovering ones identity with psychosocial and sexual maturation. During this period, the mental health of

university youth constitutes one of the important components of social health.

Universities are recognizing as stressful environment that often exerts a negative effect on the academic performance, physical health and psychological well being of the students.

Stress during education can lead to depression and have a negative impact on cognitive functioning and learning. Hence there is a need to quantify depression and its associated factors to recognize prevalence of depression and search for solution. However, there is study done at Ambo University on this title.

1.2. Literature Review

Studies in three European countries (Ice land, Norway, Switzerland) shows that the point prevalence of unipolar depression is 1.9% for males and 3.2% for females (11). The consequence of psychiatric morbidity specially depression if not identified and treated can be severe(9). This include suicide, loss of jobs and relationship, loss of productivity and deterioration in physical health including higher risk of myocardial infarction(8,10,12). Other studies shown that many risk factors for depression : physical and functional health ,loneliness and financial worries(15,17),marital state(16,18),years of formal education(18),socio-demographic factors such as gender and age (13,16), disability ,poor social support and cognitive function(19),non communicable diseases such as diabetic, hypertension stroke lung diseases and arthritis (14,16),history of self harm, family history of psychiatric problems and substance use(20).

Study done in Pondicherry shows that the overall prevalence of depression among medical students was found to be 71 %. Among those with depression, a majority (67%) had mild and moderate degree of depression. The study showed that only 54% (127) of the depressed were females and 46% (108) were males. According to cut-off scores, 68 students (29%) scored as normal, 99 (42%) as mild, 59 (25%) as moderate, 9 (3.8%) as severe. None of them had very severe depression (score>40) (22).

Different studies shows that mental disorder, in particular common mental disorders (depression and anxiety) and substance abuse (alcohol) are common profoundly disabling, run chronic courses when un treated and can contribute to increased mortality (25,26).

In developing countries mental disorders are not regarded as life threatening problems, seems to in significant, unworthy and lacking public health attention, because in these countries, morbidity and mortality due to malnutrition and infectious disease are very common(25,27).

Mental health has always been unrecognized of health concerns in developing countries, even though health policy and international consents defined health in its broadest context of physical, mental and social components for about last 30 years. Popular belief is that mental illness is of lower priority because they are not associated with disability or mortality. However the evidence suggests quite the opposite. The recent global burden of disease (27) report listed the most important causes of disability (as measured by disability adjusted life years, depression was a single most disabling disorder, accounting for more than one in ten years of life lived with disability). Whereas research reveals that, five of the top ten causes of disability were mental disorders of which depression and alcohol abuse were the most important. There is evidence that mental illness can also lead to increased mortality. In particular, the risk of death by suicide in persons with depression or substance abuse is well described (28).

The study done in the Iran shows that depression is more frequent among university students (medical students) than general population. In this study a negative correlation was seen between depression and the level of social support in students and the prevalence of depression had significant relation with their satisfaction with the educational staff, university employees and their attitude and environmental facilities (29).

The other study done in Indies indicate that married students reported significantly lower depression scores than students in visiting relation-ships. Students who were combining employment and school reported lower depression scores than those who were not employed. Maternal education significantly influenced student's level of depression such that students whose mothers had university or other tertiary education had lower depression scores while those whose mothers had primary or lower education had the highest depression scores. Students with chronic condition or disability scored higher than those without such problems on all measure of depression used in this study (30).

Study done in pakistan, on anxiety and depression among university students suggests that there are certain risk factors other than academic stressors which predispose students to psychological morbidity such as anxiety and depression. (31).

The high rate of depression among university students associated with factors such as Students educational life, social factors like alcohol use, drug addiction, family problems, family history of depression, and staying away from home (32).

According to the study done in America at Michigan University 15.6% of under graduate students and 13.0% of graduate students screened as positive for depressive or anxiety disorder. The prevalence of positive screens for depression (major or other) was 13.8% for under graduates and 11.3% for graduate students. The prevalence of overall positive screens for depression was identical by gender among under graduates and slightly

higher for females among graduate students. More students screened positive for other depression compared with major depression (8.6% versus 5.2% for under graduates and 7.2% vs 4.1% for graduate students (33).

In 35 studies conducted in Iran from 1995 to 2012 with sample size of 9743 prevalence of depression in university students was estimated to be 33% (95% CI: 32 to 34). The prevalence of depression among boys was estimated 28% (95% CI: 26 to 30), among girls 23% (95% CI: 22 to 24), single students 39% (95% CI:37 to 41), and married students 20% (95% CI: 17 to 24). (34).

A study conducted in Borena semi-nomadic community in southern Ethiopia (35), revealed the life time prevalence of all psychiatric disorders including substance abuse was 21.6%. The mental disorder excluding substance abuse was 14.6% among which neurotic and somatoform disorders were the most frequent disorders with life time prevalence of 14%. Similarly, different studies which were conducted in Addis Ababa revealed the life time prevalence of mental disorder excluding substance abuse is 13.1% and 14.3% (36). Study conducted in Jimma University showed the prevalence of anxiety and depression which accounts 41.0% and 23% respectively (37). Another community based study conducted in Jimma town revealed a prevalence of mental distress to be 22% (38) and study conducted in Addis Ababa and butajira rural community revealed the prevalence of mental distress 17.4% and 11.7% respectively (36,39).

2. Objectives

General objective

- To assess the prevalence of depression and associated factors among Ambo university students.

Specific Objectives

- To determine the prevalence of depression among Ambo university students
- To identify factors associated to depression.

3. Methodology

Study Area and study period

The study was conducted in Ambo University. Ambo is located on 125km away from Addis Ababa in western shoa Oromia regional state. Ambo University is among 3rd generation universities, those newly started education as university. Currently there are a total of 9 (nine) faculties and 31 (thirty one) departments for regular under graduate studies and 1 (one) post graduate programme.. The total student population in 2006 E.C is 9644 with number of male being 6926 and 2718 female students. This figure indicates only regular students. The study was conducted from February to June 2014.

Study Design

The institution based cross-sectional study design was used to assess prevalence and associated factors to depression among Ambo university students. Data collection was done from January,21, 2013 up to february,22, 2014.

Study Population and source population

Source population

All students who were registered in Ambo University in 2006 E.C were the source population.

Study population

Students who were registered as regular under graduate class and assigned in main campus, students who were not blind and not be critically sick were the study population.

Inclusion and exclusion criteria

Students who were sick to the extent of unable to read and write during data collection, summer, extension, distant education students, post graduate students, student who were absentee during date of data collection and students found out of main campus were excluded from the study.

Sample Size Determination

In this study sample size will be determined using single population proportion formula. The assumption will be at the confidence level of 95 and we take 50% prevalence, since there was no finding that indicate prevalence on previously done researches on the same study population. The marginal error was 5%.

$$\left(\frac{z\alpha}{2}\right)^2 (p)(1-p)$$

$$N = \frac{w^2}{p}$$

$$N = 384$$

We consider 10% non- respondent rate and our final sample size will be

$$N_f = n + 10\% \text{ non respondents}$$

$$= 384 + 39$$

$$= 423$$

Sampling Procedure

Simple random sampling technique was used to select study unit.

A list of regular undergraduate students of main campus from the registrar was prepared by their ID number. Then, the study unit was selected using the lottery method. see figure 1 for detail

Variables

Independent Variables

Socio demographic and economic characteristics including age, sex, religion, educational status (year of enrollment), faculty, residency of parents of the study subject, ethnicity, marital status and monthly income which are categorical variables. Substance use including use of chat, alcohol, cigarette smoking, use of substance like hashish/ shisha and use of sedatives as for non medical purpose were taken as independent variables.

The Dependent Variables

- Depression (yes/no)

Operational Definition

Depression:- in this study, depression is a disorder occurring throughout life marked by persistent sadness, discouragement, loss of self worth and loss of interest in usual activities. The center for epidemiologic studies depression scale was used to measure depression,

Substances use: when students use specified substances for non-medical purpose in the last year.

Data collection procedure

Data collection instrument

Data was collected using questioner having three parts. The first part contain socio-demographic information and the second part of questioner is those used to measure depression.

The questions used to measure depression are adopted from the center for epidemiologic studies depression scale (CES-D).

CES -D emphasis on affective component: depressed, mood feeling of guilty, worthlessness, feeling of helplessness and hopelessness, psychomotor retardation, loss of appetite and sleep disorders. The CES-D question composed of four factors.

- Depressed affect : blues, depressed, lonely, cry, sad
- Positive affect: good, hopeful, happy, enjoy
- Inter personal affect: Un friendly, dislike
- Somatic and retarded activity: bothered, appetite, effort, sleep, going

An overall score of CES -D, from twenty questions was added together. The minimum and maximum score are 0 and 60, with cut-off point 22. The following classification is defined for depression.

- ❖ Score less than 22 = non depressing symptoms group
- ❖ Score are 22 or more = Depressive symptoms group

Data collectors

Data was collected by a 5 individual ,

Data Quality Assurance

A pre test was conducted on 10% of the total respondents who were randomly selected from Adama university students. Then modification of grammar, spelling and arrangements of the questioner was done, for the simplicity of the questions to be under stood easily. Data collectors were made to have common understanding to each item through discussion and review of the questions. Completeness and consistency of the collected data was checked and incomplete questioner was discarded.

Data Analysis

After checking completeness of data, it was analyzed using SPSS version 16.00. The result is presented with tables, different graphs.

2. Results

The prevalence and associated factors of depression among 410 Ambo university students from year one via fifth year. The response rate constitutes 96.9%.

Socio-demographic characteristics of the respondents.

A total of 410 students were participated in the study, comprising 294 males (71.7%). The mean age was 21.69 years, with standard deviation of (+2.16years). Subjects aged 17-23 years constituted the largest age group in the study i.e. 337 (82.2%). In terms of religion, 129 (31.5%) were Muslim and 102 (29%) were Orthodox Christian. The majority of the respondents were oromo (n=215; 52.4%) which is followed by Amhara 76(18.5). See Table One for detail.

Prevalence of Depression and factors associated to it

Among the study participant 32.2% were depressed. Being female is Four times more likely to be depressed when compared with male(AOR 4.02,95%,C/I 1.22,4.03),current use of khat is three times more likely to be depressed (AOR 3.05, 95%,C/I 2.05,6.02),Being first year student when compared with the academic year is three times more likely depressed (AOR 3.00,95%,C/I 3.02,7.25).

3. Discussion

The present study estimated the prevalence & associated factors of Alcohol depression among Ambo university students. Regarding the sex of the sample and source population there was no great difference observed in this study. This similarity to some extent may enhance generalization of the finding of the study to source population as a result of slight observed homogeneity between the sample and source population. This study revealed that the prevalence of depression was 32.2%. The depression is occurred across year of the study even though there is slight higher among first year student. Study done in America at Michigan University showed that the prevalence of depression was 13% which lower than the present study. The possible reason for the difference might be the sample size difference as well as study setting difference.

The study conducted at Iran revealed that 33% of the university study had got depression which is almost similar to the present study. Another study done In Ethiopia at Jimma University showed prevalence of depression as 23% which lower when compared to the present study. This difference is most likely because of study time difference.

Being female is two times more likely to be depressed when compared with male (AOR 4.02, 95% C/I 1.22, 4.03), current use of khat is three times more likely to be depressed (AOR 3.05, 95% C/I 2.05, 6.02), Being first year student when compared with the academic year is three times more likely depressed (AOR 3.00, 95% C/I 3.02, 7.25).

4. Conclusions

The prevalence of Depression in the present study was high compared to study done at Jimma University, Ethiopia and Iran but lower when compared to study done at Michigan University, America. In this study being Female was associated to depression; Current user khat and being first year student.

Competing interests

The authors don't have competing interest with others

Authors' contributions

Kadi Hassein was participated in approving the research proposal with some revisions, participated in data collection and analysis.

Adamu Birhanu revised subsequent drafts of the paper and involve in critical review of the manuscript

All authors read and approved the final manuscript.

Keywords: Depression, Substance and Khat

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Tables and Figures

Table 1: Conceptual Frame work

The outcome variable is prevalence of depression that related to general characteristics, potential personal consequences and other related factors.

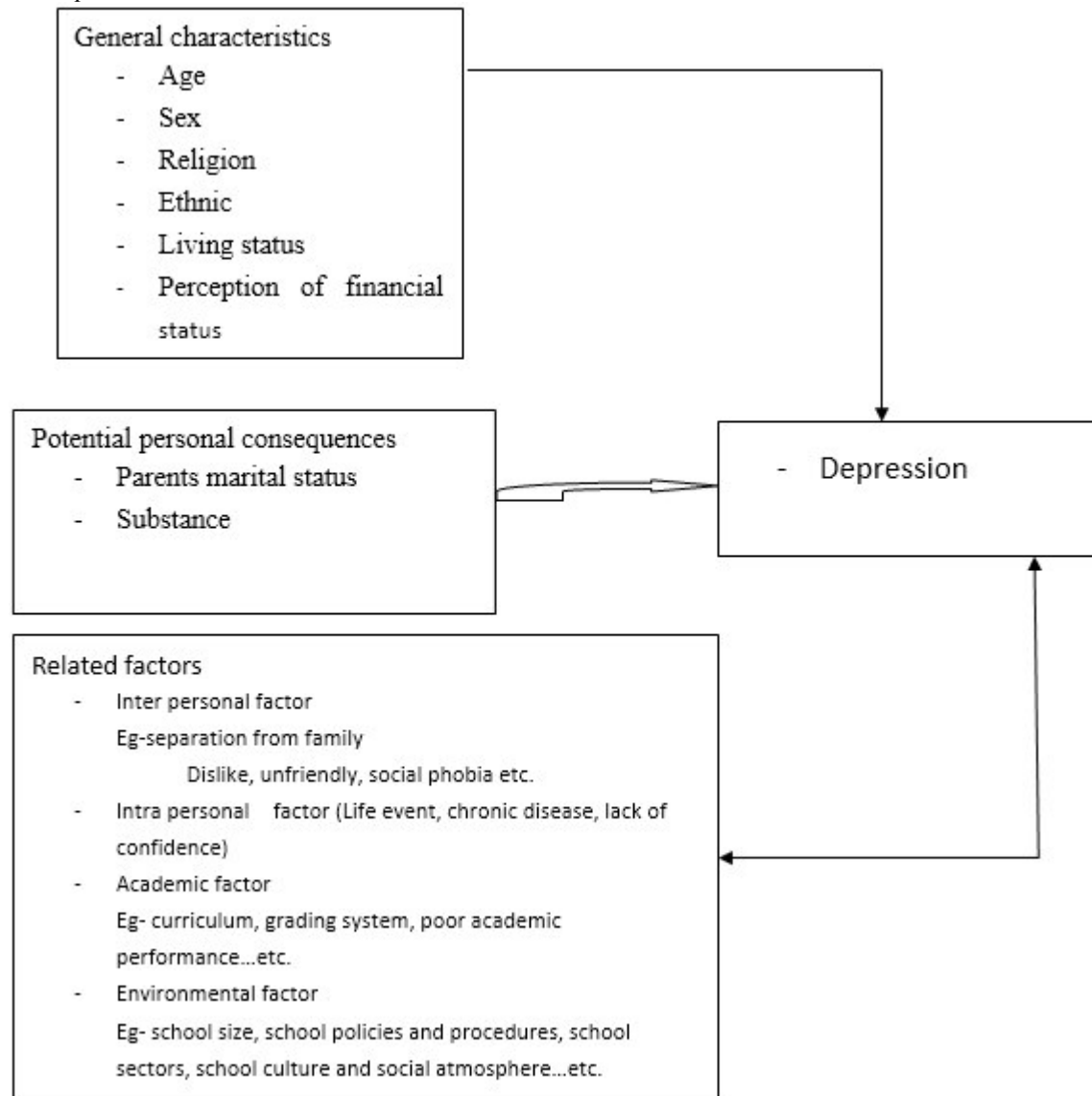


Fig.1 sampling technique

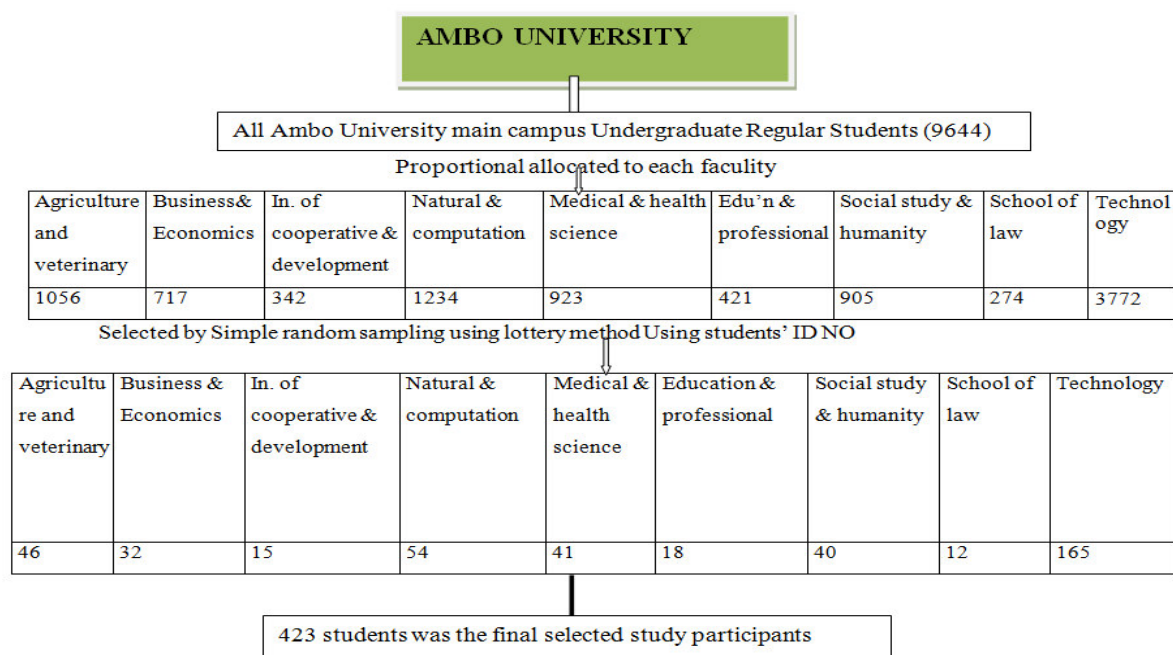


Table 2 Socio-demographic Characteristics of the respondents n=410, Ambo University, May 2014.

Characteristics	Frequency	percent
Age category		
17_23	337	82.2
24_30	73	17.8
Sex		
Male	294	71.7
Female	116	28.3
Academic year		
1 st year	179	43.7
2 nd year	79	19.3
3 rd year	146	35.6
4 th year	4	1.0
5 th year	2	0.5
Faculty		
Agriculture and veterinary	42	10.2
Institute of cooperative and developmental studies	15	3.7
Education and professional studies	18	4.4
Medical and health sciences	41	10.0
Social study and humanity	39	9.5
School of law	12	2.9
Technology	160	39.0
Natural and computational sciences	51	12.4
Business and economics	32	7.8
Religion		
Orthodox	102	24.9
Islam	129	31.5
Protestant	121	29.5
Catholic	33	8.0
Others	25	6.1
Marital status		
Single	332	81.0
Married and living together	56	13.7
Separate	18	4.4
Divorced	3	0.7
Widowed	1	0.2
Ethnicity		
Oromo	215	52.4
Amhara	76	18.5
Tigre	51	12.4
Wolaita	20	4.9
Harari	12	2.9
Somale	5	1.2
Gurage	10	2.4
Others	21	5.1
Monthly personal income(birr)		
Less than 100	116	28.3
100 to 299	68	16.6
300 to 499	70	17.1
500 and above	88	21.5
I don.t know	66	16.1

Table 2: Distribution of Substance use among respondents of Ambo University=410, May 2014.

	Frequency	percent
Khat use		
Current Users	112	27.3
Non users	298	72.7
Cigarette use		
Current Users	36	8.8
Non users	374	91.2
Alcohol use		
Current Users	111	27.1
Non users	299	72.9
Cannabis		
Current Users	9	2.2
Non users	401	97.8
Other use		
Users	19	4.7
Non user	391	95.4

Table 3: Factors associated to Depression

Variables	AOR	C/I (95%)
Age		
17-23	.72	.78,4.50
24-30	1	
Sex		
Female	4.02	2.05,4.03
Male	1	
Religion		
Orthodox	4.01	.98,5.62
Muslim	.86	.65,6.52
Protestant	.91	.23,1.12
Others	1	
Academic year		
Year I	3.00	3.02,7.25
Year II	4.02	.48,3.21
Year III	3.22	.92,5.32
Year IV	.58	.78,3.36
Year v	1	
Marital status		
Single	.55	.74,2.82
Married	1	
Others		
Ethnicity		
Oromo	1.01	.55,6.13
Amhara	1.52	.44,5.41
Tigre	2.72	.92,5.01
Others	1	
Monthly income		
Less 100 birr	1.09	.39,3.96
100-299 birr	0.53	.37,3.01
300-499 birr	1.25	.18,7.25
500 and above birr	1.72	.22,6.34
I don't know	1	
Current substances use		
Khat	3.05	2.30,7.89
Alcohol	.78	.18,5.58
Cigarette	1.23	.44,5.41
cannabis	.45	.19,4.52
Others	1	