
THE PREVALENCE AND CORRELATES OF PSYCHOLOGICAL DISTRESS AMONG UNDERGRADUATE STUDENTS OF MADDA WALABU UNIVERSITY, ETHIOPIA

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Abstract

Background: Students experiencing psychological problems, such as depression, anxiety, and stress, may face problems in managing their educational activities. **Objective:** The main purpose of this study was to examine the prevalence and correlates psychological distress among undergraduate Madda Walabu University students. **Design:** To achieve the objective cross-sectional research design was employed. **Participants:** Robe and Goba campus Madda Walabu University students were the aggregate populations of the study. The total number of population was 11,718. Of 11718 students, 384 students were obtained by using proportionate stratified random sampling technique using colleges as strata. **Instrument:** DAS-S-depression, anxiety, stress scale, and questionnaires developed by the researchers to identify the determinant factors of depression, anxiety and stress were used to collect the data. **Analysis:** Quantitatively the collected data was analyzed by using percentage, Pearson correlation, and mean scores and standard deviation. **Result and interpretation:** Among the participants, 42.1 % of the students were under depressive symptoms (13.0% mild level; 12.8% moderate level; 9.9% severe level and the rest 5.5% under extremely severe level). In terms of anxiety, 48.1 % of respondents score high anxiety level. Specifically, 6.3%, were mild; 19 % were a moderate level of anxiety; 15.1 % and 8% of the students were under severe and extremely severe level respectively. 50.3 % of the respondents were under stressful situations (19.3% mild, 21.6% moderate; 7.8% severe and 1.6% were under extremely severe condition). The Pearson correlation results indicate that there is a significant negative correlation between depression, anxiety, and stress with academic achievement. Ten identified and accepted determinant factors that led students to were psychological distress were Substance use; chronic diseases; conflicts in terms of religious issues among students; conflicts in terms of racial issues among students; family functioning problem; poor study habits; excessive pressure or coercion from parents; excessive pressure or coercion from teachers; difficulty in making friend, and unfair assessment of instructors due difference in ethnicity. **Recommendation:** The results suggest that the early prevention of anxiety, depression, and stress is critical since, if left untreated, it can have serious consequences on students' future health and career possibilities.

Keywords Academic achievement, Anxiety, Depression, Psychological distress, Stress

1. Introduction

Mental illness is a leading cause of disability worldwide, accounting for one-third of the years lost due to disability [1]. There has been increasing concern internationally about the mental health of university students and the impact unrecognized and untreated mental illness can have on impact individual students, the institution, and sometimes other students [2]. Researches are releasing the presence of psychological distress among undergraduate university students [3, 4].

Depression, anxiety, and stress are the most common, serious mental distress problems among student populations [5-7]. The prevalence of psychological distress among students reduces their self-esteem which might cause many problems at both personal and professional levels leading to dropout, impaired ability to work effectively, poor academic, disturbed relationship and suicide [8]. Another study by [9], has revealed that students' performance in University is affected by symptoms of Psychological distress. This may impair their academic achievement, lead to deterioration in relationships, marital problems and affect future employment [10]. The study by [11] reported a high prevalence of depression, anxiety, and stress, 27.1%, 47.1% and 27.0%, respectively, among a group of Turkish university students. This is consistent with other studies which reported high rates of psychological morbidity among university students globally [12, 13].

When students failed to manage stressors, they may leave University education without finishing. According to [14], up to 60% of university students left University without finishing their degrees within first and second years due to inability to manage these psychological conditions especially to cope with stress. Study by [15] found that 50% of university students who consulted mental health service complained of difficulties in the study, anxiety, depression, and tension.

The presence of psychological distress associates with students' academic achievement which is the ultimate goal of students why they are at university. According to [16], many depressed individuals may be unable to perform well in academic life and may feel that they are not reaching the standard of performance set for them. As a result, they continuously feel disappointed and

despairing. The same study [16] stated depressed individuals perceive things negatively and consider themselves as failures. This condition can definitely contribute too many serious problems in their academic life such as poor grades [16]. Study showed that there was an inverse relationship between academic achievement and depression [17-18]. The study found that students who experienced depression had a lower academic performance. University students face many problems such as separation from their families, entrance into a new environment and adaptation to educational standards causes a high level of depression [19]. When a student was too worried about their exams result, he/she would be depressed and this would affect their performance in education [20].

Students' performance is also affected by the presence of anxiety symptoms. Research demonstrated that students with a higher level of anxiety tend to obtain lower marks in their end-of-semester examination [21]. Study conducted by [22] has been conducted to see the correlation between anxiety and the influence of academic achievement, and found a student with high anxiety levels would have a lower academic achievement. Others expressed the opinion that the high level of anxiety will be associated with low academic performance [23, 24]. Similar result finds, a significant relationship between academic achievement and anxiety and found that a positive relationship between high degrees of academic achievement and low anxiety [25].

The third most common type of psychological distress among student is stress. The existence of stress according to [26] depends on the presence of the stressors. Stress is defined stressor as anything that challenges an individual's adaptability or stimulates an individual's body or mentality [27] and Academic stress is a product of a combination of academic-related demands that exceed the adaptive resources available to an individual [28].

Studies by [29 -31] demonstrated that student poor performance and stress are positively related. Here, in stress, there are contradictory issues. For example, a study by [32] on the effect of stress on students' performance in an Australian Dental school found little support for an association between increased stress scores and reduced academic performance among students. A study by [33] aimed to explore the association between stress levels and the academic performances shows that respondents with a high and severe stress level were observed to have higher cumulative grade point average (CGPA).

There is lack of research among Madda Walabu university students on the prevalence and magnitude of psychological distress and its relation with academic achievement. This may hinder our understanding about the psychological status of students at Madda Walabu University. This study focuses on the prevalence and magnitude of psychological distress among Madda Walabu University undergraduate students.

2. Method and Materials

2.1. Description of the Study Area

The study was conducted in Madda Walabu University. Madda Walabu University was established in 2006 in Bale zone, about 430 kilometers South East of the capital city of Ethiopia. In 2015 academic year the university has admitted about 13,000 students both at undergraduate and postgraduate levels by two campuses: Robe campus and Goba campus. Robe campus is the main campus of the University, which is found in Robe town. It encompasses most of the schools, students, and staff of the University. Goba campus is another campus of the university that encompasses the college of Medicine and Health Sciences and Global Referral Hospital of the University. Moreover, the university is conducting continuing education at its additional centers of Ginir and Dodola towns. The university has also established three research centers (Robe main center, Bidire, and Harawa-1 sub-center).

2.2. Research design

In this study, the researchers employed quantitative research

2.3. Participants

The total population of this study was all regular students attending their education in the two Campuses of Madda Walabu University. According to Madda Walabu registrar data, in 2015, 5859 students are attending their education from the second year and above. Of total students 4007 are males and 1776 are females. In order to select the respondents of the study, the researchers used a proportionately stratified sampling technique by using colleges and departments as strata. The number of the sample size for the study was determined based on the scientific sample size calculator developed by Krejcie & Morgan (1970). The researchers used this scientific sample size calculator because this technique was employed with a 95% confidence level and 5% degree of precision. Totally, 384 undergraduate students were selected as a sample.

2.4. Measures

DASS-depression, anxiety, stress scale, and questionnaires developed by the researchers to identify the factors of psychological distress. Overall findings demonstrated that DASS scale had acceptable and fairly high validity and reliability scores and that it may be used as an efficient instrument in order to assess emotional states of university students. To check the reliability of DAS in this study pilot study was conducted. In addition, these tools were translated language and translated to Amharic by language expert the reliability index of the current study indicates all instruments are good.

The DASS is a 42-item questionnaire which includes three self-report scales designed to measure the negative emotional states of depression, anxiety, and stress. Each of the three scales contains 14 items, divided into subscales of 2-5 items with similar content. The depression scale items are 3, 5, 10, 13, 16, 17, 21, 24, 26, 31, 34, 37, 38, 42; The anxiety scale items are 2, 4, 7, 9, 15, 19, 20, 23, 25, 28, 30, 36, 40, 41 and the stress scale items are 1, 6, 8, 11, 12, 14, 18, 22, 27, 29, 32, 33, 35, and 39. Findings from discriminant validity showed that the DASS discriminates the normal and clinical population (Lovibond & Lovibond, 1995). Concurrent validity coefficients were found to be high (.87 and .84, respectively). Cronbach internal consistency of the entire scale was .89. Item-total correlations ranged from .51 to .75. Test-retest and split-half reliability coefficient scores were .99 and .96 respectively. These results demonstrate that the DASS is a valid and reliable instrument. Studies conducted by Ramli et al, (2007), Cronbach alpha values were 0.75, 0.74 and 0.79 respectively.

On the other study the three DAS subscales were moderately inter-correlated; the standardized correlation between them ranged between 0.69 and 0.84 (McDowell, 2006)

Overall findings demonstrated that this scale had acceptable and fairly high validity and reliability scores and that it may be used as an efficient instrument in order to assess emotional states of university students.

2.5. Data analysis

After the data were collected it was analyzed qualitatively and quantitatively. Quantitatively, the collected data was inserted to SPSS 20 version and analyzed by using Percentage, Pearson correlation, Descriptive mean scores, and standard deviations.

2.6. Ethical Consideration

A letter introducing the objective of the study, and maintaining the confidentiality were attached as the cover page of the questionnaire. Participants gave informed consent for participation in the study.

3. Result

3.1. Demographic Results

Table 1: place of residence

		Frequency	Percent (%)
		Urban	169
Place of residence	Rural	215	56.6
	Total	384	100
	Sex of respondent	Male	213
	Female	171	44.5
	Total	384	100

The above table 1 indicates the respondents' place of residence and their sex. From the respondents, 169(44.0%) of students are from urban and the rest 215 (56.0%) are from rural whereas 213(55.55%) were males and the rest 171(44.5%) female

Table 2: Average Age of respondent

Age of respondent	Mean	N	Std. Deviation
Male	21.5681	213	1.49569
Female	20.7135	171	1.07637
Total	21.1875	384	1.39047

The average age of the respondents is 21.56 for males and 20.71 for females. The maximum age of the respondent is 23.06 for males and 21.78 for females.

3.2. Descriptive results from main variables

Table 3: Mean score of depression, anxiety stress, and self-esteem with respect to sex

sex of respondents		De- pres- sion	Anxie- ty	Stress
Male	Mean	1.72	1.89	1.80
	N	213	213	213
	Std. Devia- tion	1.20574	1.3488 8	1.070 86
Female	Mean	2.11	2.61	2.06
	N	171	171	171
	Std. Devia- tion	1.30533	1.3896 5	1.074 55
Total	Mean	1.90	2.21	1.92
	N	384	384	384
	Std. Devia- tion	1.26433	1.4120 2	1.078 70

Where 1- normal; 2 mild; 3-moderate; 4 -severe;5 -extremely severe

The above table 3 depicted the average scores of depression, anxiety, stress with respect to their sex. As indicated the average depression for the male is M=1.72 with SD=1.20 and M=2.11 with SD=1.30. The average mean score of anxiety for male M= 1.89, SD=1.34 whereas M=2.61, SD=1.38 for females. M=1.80, SD=1.07 and M=2.06, SD=1.07 were the average stress score for male and female participants respectively.

The prevalence of psychological distress among undergraduate students

Table 4: Prevalence of Depression

Status of depres- sion	Frequency	Percent
Normal	226	58.9%
Mild	50	13.0%
Moderate	49	12.8%
Severe	38	9.9%
Extremely severe	21	5.5%
Total	384	100.0

As indicated in Table 4 above, 226(58.9%) of the students were under normal condition. The rest 42.1 % of the students were under depressive symptoms. From these students, 50(13.0%) were under mild level; 49(12.8%) were under moderate level; 38(9.9%) were under severe level and the rest 21(5.5%) under extremely severe level.

Table 5: Magnitude /prevalence of anxiety

Level of anxiety	Frequency	%
Normal	198	51.6%
Mild	24	6.3%
Moderate	73	19%
Severe	58	15.1%
Extremely severe	31	8 %
Total	384	100

As depicted in above table 5, the prevalence of anxiety among the respondent student is very high. From the respondents, only 198(51.6 %) of students were under the normal condition whereas 48.1 % of respondents were under anxiety level. Specifically, 24(6.3%), were mild; 73(19.0) were under a moderate level of anxiety. The rest 58(15.1 %), and 31(8.1%) of the students were under severe and extremely severe level respectively.

Table 6: The magnitude of stress

Level of stress	Frequency	%
Normal	191	49.7
Mild	74	19.3
Moderate	83	21.6
Severe	30	7.8
Extremely severe	6	1.6
Total	384	100

The above table 6 showed that, the magnitude of stressful conditions among respondents. As indicated 191(49.7%) of students were under normal condition and the rests score high in stressful condition (50.3 %). These were 74(19.3) mild, 83(21.6%) moderate; 30(7.8%) severe and 6(1.6%) were under extremely severe condition

Correlates of psychological distress with academic achievement

Table: 7 Pearson correlation of psychological distress (depression, anxiety, stress) and CGPA

	CGPA	Depression	Sig. (2-tailed)	N
Depression	-.618**	1	.000	384
Anxiety	-.819**	.778**	.000	384
Stress	-.596**	.743**	.000	384

** Correlation is significant at the 0.01 level (2-tailed).

As indicated above Table 7 there is strong negative relationship between academic achievement and depression scores [$r = -0.618^{**}$, $n = 384$, $p = 0.000$]. This indicates when the level of depression score increases students' grade point decreases.

As also depicted above, there is strong negative significant relationship among students' academic achievement and anxiety score [$r = -0.819^{**}$, $n = 384$, $p = 0.000$]. This means that anxiety symptoms and students' academic achievement go in the opposite direction. As indicated above stress is also negatively correlated with students' academic achievement. Both variables has negative strong relationship [$r = -0.596^{**}$, $n = 384$, $p = 0.000$]. students' academic achievement has strong significant positive relationship with their self-esteem [$r = 0.660^{**}$, $n = 384$, $p = 0.000$].

The study result showed in above table 7, there is a strong positive significant correlation between the two variables (depression and anxiety) [$r = 0.778^{**}$, $n = 384$, $p = 0.000$]. There is also positive strong significant relationship between depression scores and stress cores [$r = 0.778^{**}$, $n = 384$, $p = 0.000$]. In both cases the longest the symptoms of stress and anxiety, the most probability of developing depression symptoms and vice versa. There is also strong significant negative moderate relationship between depression scores and self-esteem of students [$r = -.445^{**}$, $n = 384$, $p = 0.000$].

Anxiety symptoms/scores and stress symptoms/scores has positive strong significant relationship [$r = +0.719^{**}$, $n = 384$, $p = 0.000$] and anxiety and self-esteem of student has negative strong significant relationship [$r = -0.585^{**}$, $n = 384$,

$p = 0.000$].

Stress has strong negative significant relationship with self-esteem of the respondent students

$[r = -.570^{**}, n = 384, p = 0.000]$.

3.3. Accepted Factors led undergraduate students to psychological distress among Madda Walabu University

Table 8: perceived factors among Students Based on Individual Scores to DAS

	Factors	Mean	St.dev	Rank
1	Having difficulty in dating	1.5443	1.13022	17
2	Difficulty in making friends	1.6250	1.05958	9
3	Conflicts in terms of religious issues among students	1.8490	1.11393	3
4	Lack of coin for raw materials	1.3646	1.07056	25
5	Worry about self-safety in the campus	1.3437	1.10379	26
6	Don't have an adequate recreational facility in terms of type and quantity	1.2474	1.06633	28
7	Conflicts in terms of racial issues among students	1.7396	1.13795	4
8	Living room inconvenience to sleep anytime one wants	1.2786	1.07570	27
9	Overcrowding in dormitory	1.5234	1.54969	20
10	New conditions that are stressful in the first exposure (like presentation,)	1.5755	.98793	14
11	Sleep deprivation	1.5026	1.05711	22
12	School work increases (Eg. Excessive homework)	1.5651	1.02243	16
13	Loneliness	1.5651	1.20310	16
14	Homesickness	1.1354	1.15277	30
15	Unfamiliarity of environment	1.2214	1.03236	29
16	Excessive pressure or coercion from parents	1.6615	1.13339	7

17	Excessive pressure or coercion from teachers	1.656 2	1.143 29	8
18	Test-anxiety	1.507 8	1.133 37	21
19	Deficits in social support	1.539 1	1.068 68	18
20	curriculum and instruction	1.494 8	1.059 57	23
21	Teamwork-related issues (Eg. Work with people you don't know)	1.385 4	1.706 20	24
22	Unfair assessment of Instructors due difference in religion	1.570 3	1.133 52	15
23	Unfair assessment of Instructors due difference in ethnicity	1.596 4	1.152 17	10
24	Unfair assessment of Instructors due to gender	1.580 7	1.1189 1	13
25	gender violence	1.591 1	1.141 22	12
26	Loss of loved one	1.593 7	1.174 83	11
27	Family functioning problem	1.731 8	1.157 76	5
28	Having inflexible rules about how one should behave	1.526 0	1.078 80	19
29	Substance use-alcohol	1.862 0	1.187 05	1
30	Chronic diseases	1.822 9	1.149 37	2
31	Poor study habits	1.724 0	1.260 71	6

N.B. Bolds are the leading 10 factors

The above Table 8 presents the means and the standard deviations for 31 perceived sources of depression, anxiety, and stress and they are developed from academic factors, intrapersonal and self-factors; relationships, interpersonal, social factors; teaching quality, relations with teachers, support from teachers factors; and environmental, campus, administrative and transition factors.

From the table above 8, the leading factor is health related /physical factors: substance abuse (m=1.86) and chronic illness (M=1.82) followed by relationship, interpersonal and social factors: conflicts in terms of religious issues among students (M=1.84)

For also analysis of relationship, interpersonal and social factors: "Conflicts in terms of ethnic issues among students" is the leading contributing factor for depression, anxiety and stress with a mean score of 1.73 followed by "family functioning problem" with a mean score of 1.73

An academic factor is the next leading factor "Poor study habits with a mean score of 1.72 by following "Excessive pressure or coercion from parents" with a mean score of 1.66.

Hierarchically with their mean score, the leading factors are Excessive pressure or coercion from teachers (m=1.6562); Difficulty in making friends (M= 1.6250); Unfair assessment of Instructors due difference in ethnicity (M=1.5964).

4. Discussion

In this part, the result of this study is discussed with the studies conducted in different setting by other scholars. The result showed 42.1 % of the students were under depressive symptoms (13.0% mild; 12.8% moderate; 9.9% severe 5.5% under an extremely severe level of depression. The result also showed 48.1 % are under anxiety level (6.3%, mild; 19.0% moderate 15.1 % severe, and 8.1% under extremely severe anxiety level). Concerning stress, 50.3 % of respondents were under stressful conditions. From these individuals, 19.3% mild, and 21.6% moderate; 7.8% severe and 1.6% were under extremely severe condition.

In general, in our study, the prevalence level of depression and anxiety was detected among 42.1% and 48.1% of students. Similar studies conducted in Egypt universities reported higher figures; at Menoufiya University, the prevalence of depression and anxiety was 63.6% and 78.4% respectively [37]. Another study conducted in Mansoura University among medical students has reported lower figures; the prevalence of depressive and anxious symptoms was 28.3% and 21.2. Our findings are different to what is reported in other countries; in Pakistan, a prevalence of 70% anxiety and depression was reported among medical students [38].

On the other hand, our findings are similar to the study conducted by [39] have reported a prevalence of 43.89% of anxiety and depression among 482 medical students, In Beirut , 27.63% and 69% [40]; and in Iran was 33% depression [41]. Similarly, a study conducted by [42] in a sample of university students across 10 universities in Hong Kong revealed that 41% of students experienced moderate levels of anxiety. Research result by [43] Reported that 54% of UK university students reached the sub

threshold for anxiety.

The study conducted by [44] yielded a similar result that 41.9% of students in one of the Malaysian public institutions were found to have depression.

Our study result indicated, there is a negative strong significant relationship between depression, anxiety, and stress with students' academic achievement. Contrary to depression, anxiety, and stress have a strong positive significant relationship with each other. This result is similar with the study conducted by [22] research which stated student with high anxiety levels would have lower academic achievement among students. Others expressed the same opinion that the high level of anxiety will be associated with low academic performance [23, 24].

Similar result finds, a significant a positive relationship between academic achievement and anxiety [25], relationship between high degrees of academic achievement and low anxiety.

In terms of stress, for example, studies conducted by several researchers indicated that student poor performance and stress are positively related [29-31, 45]. Contrary, a study by [46] on the effect of stress on students' performance in an Australian Dental school found little support for an association between increased stress scores and reduced academic performance among students. Similarly, [47] examine the impact of stress factors on the academic performance of Pre-Diploma Science students at the University of Technology Malaysia. Here a lot of studies indicated contrasting ideas. The problem here is the severity level and an individual coping ability. For example, a study by [33] aimed to explore the association between stress levels and the academic performances shows that respondents with a high and severe stress level were observed to have higher cumulative grade point average (CGPA).

Another study conducted by [48]) found that stress affects students' academic achievement. Students complained of feeling stressed academically when it comes to facing exams and grade competition and having too much information to study yet insufficient time to master the knowledge. A similar finding revealed that stress is significantly correlated with poor academic performance in his study of business undergraduates [49].

Based on the research findings, depression is negatively related to the academic performance at similarly this research is consistent with [50] who claims that depression as one of the factors that contributed to academic performance.

5. Conclusion

The high rates of psychological distress among university students have major implications, not only with psychological morbidity, that will have adverse effects on students' health, development, educational attainment, and quality of life, but also the deteriorating influence on their own families, institutions and even other people's lives.

There is Statistical significance of DAS with academic achievement and self-esteem. Based on the result, there is a significant negative correlation between depression, anxiety, and stress with academic achievement. The higher depression, anxiety, and stress among students, the lower their academic achievement.

A list of ten major perceived factors of psychological distress among students were: Substance use; chronic diseases; conflicts in terms of religious issues among students; conflicts in terms of racial issues among students; family functioning problem; poor study habits; excessive pressure or coercion from parents; excessive pressure or coercion from teachers; difficulty in making friends; unfair assessment of instructors due difference in ethnicity.

6. Recommendations

- ✓ The high prevalence of depression, anxiety, and stress among students has major implications. So, it is better to develop strategies in place to identify and support all students suffering from depression, anxiety, and stress. Even there are students who are severely anxious which needs immediate interventions.
- ✓ In terms of psychological distress prevention, freshman students need to be oriented about learning skills, time management skills, and communication skill in order to meet academic requirements, arrange their time effectively for learning and leisure activities and overcome difficulties in working in the new environment through workshop and meeting before the starting of class.
- ✓ It is better if Madda Walabu University rearranges and organizes the service of guidance and

counseling for its students

- ✓ In general, taking a comprehensive institutional approach to creating healthier learning environments by enhancing the full spectrum of student life services, and revising administrative policies as well as academic practices that influence communication and collaboration around these issues is good.

Competing Interests

The authors declare that they have no competing interests.

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