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PSYCHOLOGICAL DISTRESS: PREVALENCE, ASSOCIATED FACTORS AND EXPERIENCES AMONG UNDERGRADUATE MEDICINE AND HEALTH SCIENCES STUDENTS OF BAHIR DAR UNIVERSITY, Northwest Ethiopia, 2024

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BAHIR DAR UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCES

SCHOOL OF MEDICINE

DEPARTMENT OF PSYCHIATRY

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BY: MESERET TADESSE (BSc IN Psychiatry)

JANUARY, 2025

BAHIR DAR, ETHIOPIA

BAHIR DAR UNIVERSITY

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BY: Meseret Tadesse (BSc)

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2. Dr. Nekatbeb Feleke (MD, Psychiatrist)

3. Mr. Habtie Belete (PhD Candidate)

A THESIS TO BE SUBMITTED TO BAHIR DAR UNIVERSITY, COLLEGE OF MEDICINE AND HEALTH SCIENCES, SCHOOL OF MEDICINE, DEPARTMENT OF PSYCHIATRY, IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTERS OF INTEGRATED CLINICAL AND COMMUNITY MENTAL HEALTH

January, 2025

Bahir Dar, Ethiopia

DECLARATION SHEET

This is to certify that the thesis entitled "Psychological Distress: Prevalence, Associated Factors and Experiences among Undergraduate Medicine And Health Sciences Students of Bahir Dar University, Northwest Ethiopia, 2024" submitted in partial fulfillment of the requirement for the degree of masters of integrated clinical and community mental health, department of psychiatry, school of medicine,college of medicine and health sciences, Bahir Dar University, is prepared by myself. It has not been submitted, in whole or in part, in any previous application for a master's degree.

Name of the candidate: Meseret Tadesse (BSc Psychiatry)

Signature---

Date..21/06/2017 E.C

APPROVAL SHEET OF THE THESIS REPORT

BAHIR DAR UNIVERSITY

College of Medicine and Health Sciences, School of Medicine, Department of Psychiatry

APPROVED BY EXAMINING BOARD

As member of the examining board of the final integrated clinical and community mental health open defense, we certify that we have read and evaluated the thesis prepared.

By: Meseret Tadesse

Entitled: - psychological distress: prevalence, associated factors and experiences among undergraduate medicine and health sciences students of bahir dar university, 2024

...../...../.....

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We hereby certify that I have read this thesis prepared under my direction and recommended that it is accepted as fulfilling the thesis requirement.

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List of Acronyms/abbreviations

AOR: - Adjusted odd ratio

BDU: - Bahirdar University

CGPA: - Cumulative Grade Points Average

CI: - Confidence Interval

CMHS: - College of medicine and health sciences

COR: - Crude odd ratio

ETB: - Ethiopian birr

G.C:- Gregorian calendar

GHQ-28:- General Health Questionnaires with 28 item

IRB: - Institutional review board

K-10:- Kessler Psychological Distress Scale with 10 item

PD: - Psychological Distress

SRQ-20:- 20 item Self-Reported Questionnaire

USA: - Unites States of America

WHO:-World health organization

WTAI: - Westside test anxiety inventory

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Abstract

Background: Psychological distress, commonly characterized by symptoms of depression and anxiety, significantly affects the mental well-being of students. Understanding the factors that contribute to this distress in students is essential for addressing its impact.

Objective: To assess the prevalence of psychological distress, its associated factors and exploring students` personal experience of distress during period of conflict among Undergraduate Medicine and health science students of Bahir Dar University in 2024.

Methods: - A convergent mixed-method study was conducted from October, 1 to 30 using stratified random sampling to select a total of 424 participants. Data were collected with a semi-structured interview guided questionnaire; K-10 was used. Binary and multivariable logistic regression analyses were done using SPSS-27, with results expressed as odds ratios and 95% confidence intervals. For the qualitative study 8 participants were slected purposivly, and in-depth interviews were analyzed thematically.

Results: The prevalence of psychological distress among the study participants was found to be 48.9%. Being female (AOR=2.4, 95% CI, 1.07,2.60), rural background(AOR=1.7, 95%CI=1.06,2.90), lower CGPA (AOR=2.819, 95%CI= 1.39, 5.70), Extremely high test anxiety (AOR=6.04, 95%CI 2.50,14.60), no religious practice at all (AOR=2.7, 95%CI=1.15, 6.50), lack of interest to department (AOR=5.0, 95% CI=2.72, 9.20), family history of mental illness (AOR=6.1,95CI=2.89, 13.01), poor social support (AOR=3.8, 95%CI=1.65, 4.72), were significantly associated to it. Students also expressed heighten distressed, particularly during times of conflict, when they experienced fear, anxiety, and hopelessness.

Conclusion-: This study revealed a high prevalence of psychological distress among undergraduate medicine and health sciences students of Bahir Dar University, who shared personal experiences of fear, anxiety, and hopelessness . To cope with these challenges, they identified strategies such as socializing, meditation, and prayer. Factors such as being female, from a rural background, having a low CGPA, high test anxiety, lack of religious practice, poor social support, and a family history of mental illness were linked to higher distress. The findings suggest that universities should enhance mental health support, stress management workshops, counseling, and encourage social connections to address these issues.

Key word: Psychological distresses, prevalence, undergraduate, explore, experiences

1. Introduction

1.1. Background

Psychological distress refers to a state of poor psychological well-being or a mental health issue characterized by a variety of symptoms, ranging from depression and anxiety to functional disabilities and behavioral problems. Additionally, somatic symptoms such as sleep disturbances, headaches, and backaches may also occur (1, 2, 3). It can also manifest as emotional confusion and related symptoms without constituting a medical illness. Individuals experiencing this distress may face difficulties in the way they think, feel, or behave (4, 5).

Emerging adulthood is a developmental phase between adolescence and adulthood, marked by numerous transitions and challenging tasks such as financial self-sufficiency, career choices, intimate relationships, and preparing for adult life (6). For many, this period coincides with years of higher education, which brings additional demands, including academic performance pressures, changes in living conditions, and adjustment to new social and educational environments (7).

Undergraduate education is a critical period in students' lives, as they navigate social and academic demands while preparing for future careers. This phase has been associated with high rates of psychological distress (8, 9). Reports suggest that between 25% and over 50% of students experience psychological distress, while the general population typically reports levels ranging from 10% to 30% (9).

Medical and health science education requires undergraduates to fully commit and assume considerable responsibilities to meet the learning outcomes essential for becoming proficient health professionals. The rigorous nature of this training, characterized by intense dedication, substantial workloads, and academic pressures, often places students under significant stress (10). These ongoing challenges and the demanding learning environment can sometimes lead to psychological distress (11). Therefore, it is crucial to identify the factors contributing to this distress in order to develop targeted support systems that help students manage it effectively.

1.2. Statement of the problem

Mental health disorders significantly impact university students globally, contributing notably to the global disease burden. These disorders account for approximately 11% of disability-adjusted life years (DALYs) worldwide (12). Research suggests that around 30% of university students globally experience mental health challenges, with stress-related disorders, anxiety, and depression being among the most common (13).

In the United States, a nationally representative survey found that 3.5 million individuals who did not complete high school and 4.3 million who did not finish college are affected by mental health issues, severely hindering their education and early career prospects (14). In Africa, mental illness represents a major public health issue, though it is frequently underrecognized (15). In South Africa, studies have reported a 27% prevalence of common mental disorders, while in Ethiopia, mental health conditions contribute to 11% of the overall disease burden (15, 16).

Psychological distress is a significant global issue that affects various societal groups, and university students, in particular, experience higher levels of distress (17). The causes of this distress are multifaceted and include academic pressure, the constant pressure to succeed, financial difficulties, and external expectations from peers, teachers, and family. Additionally, uncertainties about their future exacerbate the mental strain (18, 19). These stressors can result in negative outcomes, such as depression, anxiety, and decreased life satisfaction (20).

Psychological distress among students is widespread in both developed and developing countries, necessitating urgent attention and early intervention, particularly in developing nations like Ethiopia, where it represents a significant public health challenge (21). A systematic review of studies from North America revealed that medical students experience notably higher levels of distress compared to the general population (22). Similarly, studies from outside North America have shown distress prevalence rates ranging from 12.2% to 96.7% (23). In Africa, nationally representative studies have reported that 30.1% of Egyptian medical students and 25.2% of Nigerian medical students experience psychological distress (24, 25). In Ethiopia, reports indicate that psychological distress rates among medical students can be as high as 49.1% (26, 27).

The severity of psychological distress significantly impacts students' educational performance and overall health, which can, in turn, affect their future opportunities. This underscores the need for enhanced support systems within colleges to assist students facing psychological difficulties and promote optimal long-term outcomes (28).

The consequences of psychological distress are evident not only in students' mental health but also in their academic performance and personal lives. In high-pressure environments such as medical and health sciences programs, students are at risk of experiencing burnout, reduced empathy, increased medical errors, and even suicidal ideation (29, 30). Longitudinal studies across multiple U.S. medical schools have revealed alarming rates of burnout (49.6%) and suicidal ideation (11.2%) among medical students (31).

The impact of psychological distress extends beyond academic decline, potentially leading to long-term mental health challenges such as chronic stress, depression, burnout, suicidal ideation, and attempts (32). For instance, a study of Ethiopian medical students found that 14% had experienced suicidal ideation, and 7.4% had attempted suicide (33).

These issues may result from undiagnosed psychological distress, making it essential to better understand and address these challenges. Gathering evidence-based data on these concerns is crucial for planning effective interventions. Early identification of contributing factors and targeted support measures can enhance students' mental health, improve academic performance, and contribute to better career outcomes (34, 35).

Given these concerns, this study aims to assess the prevalence of psychological distress among undergraduate medical and health sciences students at BDU in 2024. Additionally, it seeks to identify the factors associated with distress and explore how personal experiences, such as ongoing civil unrest, might create additional stressors that exacerbate psychological distress within the university student population.

1.3. Justification and Significance of the study

Becoming a qualified physician is a stressful journey, filled with many challenges that can lead to psychological distress. While estimates of psychological distress at the community and institutional levels in Ethiopia exist, they may not accurately reflect the current experiences of students at BDU. Factors such as context and society can influence the prevalence and nature of distress, making it important to study these issues in a more specific manner (2, 33). This study, therefore, employed a mixed-methods approach to investigate students' personal experiences of distress, particularly during periods of conflict, in order to gain a deeper understanding of their emotional and psychological struggles.

The findings of this research aimed to address gaps in understanding of psychological distress, with particular attention to the emotional and situational factors unique to medical and health science students. By identifying these challenges, the study provided valuable insights for program planners, policymakers, and educational institutions, enabling the development of more effective support systems tailored to the specific needs of medical and healthcare students. Ultimately, the research sought to contribute to the creation of a healthier academic environment that would promote the well-being and success of future healthcare professionals.

2. Literature review

2.1. Prevalence of psychological distress among students

Numerous studies globally indicate a higher prevalence of psychological distress among medical and health science students compared to the general population, both in Eastern and Western countries (36). Research from the University of Adelaide, Australia, examining mental distress and self-reported treatment rates among students in fields like medicine, law, psychology, and mechanical engineering, found that 48% of undergraduate students experienced mental distress, a rate 4.4 times higher than their age-matched peers in the general population (18).

Similarly, in the United States, a study found a 30% prevalence of psychological distress among undergraduate students, whereas studies conducted in Norway, Iceland, and Germany reported prevalence rates of 22.9%, 22.5%, and 19.2%, respectively (37). A cross-sectional study among Colombian medical students using the Hospital Anxiety and Depression Scale (HADS) revealed that 65.9% experienced psychological distress, with 75.3% reporting depressive symptoms and 50.5% exhibiting anxiety symptoms (38). In a large-scale study across 16 Canadian universities (n=7800), 30% of students reported experiencing high levels of psychological distress (39). In Northern England, a study using the General Health Questionnaire (GHQ) indicated that 36% of first-year medical students scored above the threshold, suggesting significant psychological disturbance (40). A cross-sectional study at federal university medical schools in Brazil reported prevalence rates of mental distress at 29.6% and 44.7% (41).

Furthermore, studies from India have revealed varying levels of mental distress among medical students: 30.39% in Bangalore, 34.4% in a private medical college in Amritsar, and 53.3% at Pandit Bhagwat Dayal University, as measured by the General Health Questionnaire (42). In Hong Kong, an alarming 87% of medical students screened positive for psychological distress on the General Health Questionnaire (43). Likewise, a study from Peshawar Medical College in Pakistan found that 13.6% of medical students experienced psychological distress (44).

Other cross sectional study conducted among Dutch students indicated that prevalence of mental distress was found 54 % and 48 % among preclinical and clinical medical students respectively (45). Similarly, a comparative study across eight medical schools in Bangladesh

found that 54% of students reported mental distress (46). Moreover, a study in Saudi Arabia reported that 56.3% of medical students suffered from psychological distress (47).

In Syria, indicators such as depression, anxiety, and stress were highly prevalent. Specifically, 60.6% of participants reported moderate to severe depressive symptoms, while 52.6% experienced psychological distress, and 35.1% suffered from anxiety (48). A secondary data analysis from the Global School-Based Student Health Survey, covering 12 developing countries, revealed a wide range in the prevalence of psychological distress, with rates ranging from 16.5% in Myanmar to 48.8% in Kenya, with anxiety levels varying from 36.0% in Myanmar to 79.1% in the Philippines (49).

In Africa, studies have similarly highlighted the prevalence of mental distress. For example, in Nigeria, 36.9% of undergraduate students reported psychiatric symptoms. In Egypt, research among 700 medical students found that 59.9% were affected by psychological stress, while 57.4% of health science students in Uganda reported experiencing stress. A study in Zimbabwe found an even higher rate, with 64.5% of first-year medical students experiencing mental distress (50, 51). In contrast, at the University of Hargeisa in Somaliland, the prevalence was notably lower at 19.8% (52).

In Ethiopia, a cross-sectional study at Adama University involving 413 students, using the SRQ-20 tool, found that 21.6% of students reported mental distress (53). Other similar studies conducted at universities across Ethiopia found prevalence rates of mental distress ranging from 32.6% in Addis Ababa to 49.1% in Hawassa, 35.2% in Jimma, and 40.9% in Gondar (4, 26, 27, 54).

2.2. Factors associated with psychological distress

2.2.1. Socio-demographic factors

Several socio-demographic variables have been identified as important contributors to psychological distress among students. For instance, in India, male students had a mean SRQ score of 4.425, whereas females scored 7.151, with this difference being statistically significant ($p<0.001$). Furthermore, students from rural backgrounds were more likely to experience mental distress (30). A recent cross-sectional study at the University of Belgrade, Faculty of Medicine, on gender differences in academic stress and burnout among final-year medical students, using the General Health Questionnaire (GHQ-12) and Maslach Burnout

Inventory (MBI), found that female students rated their physical health and general stress levels worse than males (55). Similarly, a cross-sectional study in Saudi Arabia, examining stress among medical students at the College of Medicine using Kessler's scale (K10), indicated that stress prevalence was higher among females compared to males (75.7% vs. 57%) (47). A nationally representative study in South Africa revealed that 23.9% of participants aged 15-24 were psychologically troubled, with 20.1% reporting significant distress (56). In Ethiopia, specifically Addis Ababa, female medical students reported more mental distress than their male counterparts. Other factors such as age, sex, marital status, and financial support were also found to be linked to mental distress (54).

2.2.2. Academics factors

In terms of academic factors, a study examining distress levels across disciplines in Australia found that students in non-health fields such as law and mechanical engineering experienced more distress than those in health-related disciplines. For instance, 58% of law students, 52% of mechanical engineering students, 44% of medical students, and 40% of psychology students reported mental distress (18).

Similarly, research at Hawassa University revealed that freshman students exhibited higher levels of mental distress compared to students in later academic years. Notably, the mean CGPA for students experiencing mental distress was 2.72, while it was higher at 2.86 for those without distress, a statistically significant difference (57). Additionally, research from Ethiopia identified several factors affecting psychological distress, including interest in the department (4).

2.2.3. Substance use factors

As evidenced by study from Australia, university students who score high in Alcohol use identification scale (AUDIT) have higher psychological distress score on Kessler depression assessment scale than those who score low (18). Similarly, a Research across 12 developing countries indicated that past 30-day alcohol use was linked to psychological distress, and students who had been drunk at least once in their lifetime faced increased psychological distress in 11 of these countries (49). Additionally, a study at Mekelle University found associations between mental distress and behaviors such as khat chewing, alcohol consumption and smoking cigarettes (58).

2.2.4. Psychosocial factors

A study from the University of Michigan, USA, found that college students with low-quality social support, as measured by the Multidimensional Scale of Perceived Social Support, were significantly more likely to experience mental health issues. Specifically, these students faced a six-fold higher risk of depressive symptoms compared to those with high-quality social support (37). Similarly, research conducted in Peshawar, Pakistan, assessed mental distress among medical students taking exams and found that 13.6% of them experienced significant mental distress. This suggests that exam-related anxiety notably impacts student mental health (44).

A cross-sectional study of medical students at Addis Ababa University found that 52.30% experienced problematic test anxiety (54). Additionally, research from Ethiopia identified several factors affecting mental distress, religious practice, and financial distress (4). A cross-sectional study among school adolescents in India showed that suicidal thoughts, and suicidal attempts were more significantly associated with psychological distress (59)

2.2.6. Clinical factors

A research at Adama University identified a notable correlation between a family history of mental illness and increased mental distress (53). At Addis Ababa St. Paulo's Millennium Medical College, a substantial proportion of medical students experienced depression (51.30%), anxiety (30.10%), and comorbid depression and anxiety (21.20%), which contributed to their overall distress. Additionally, chronic medical illness was found to impact the level of mental distress (54).

2.3. Conceptual frame-work

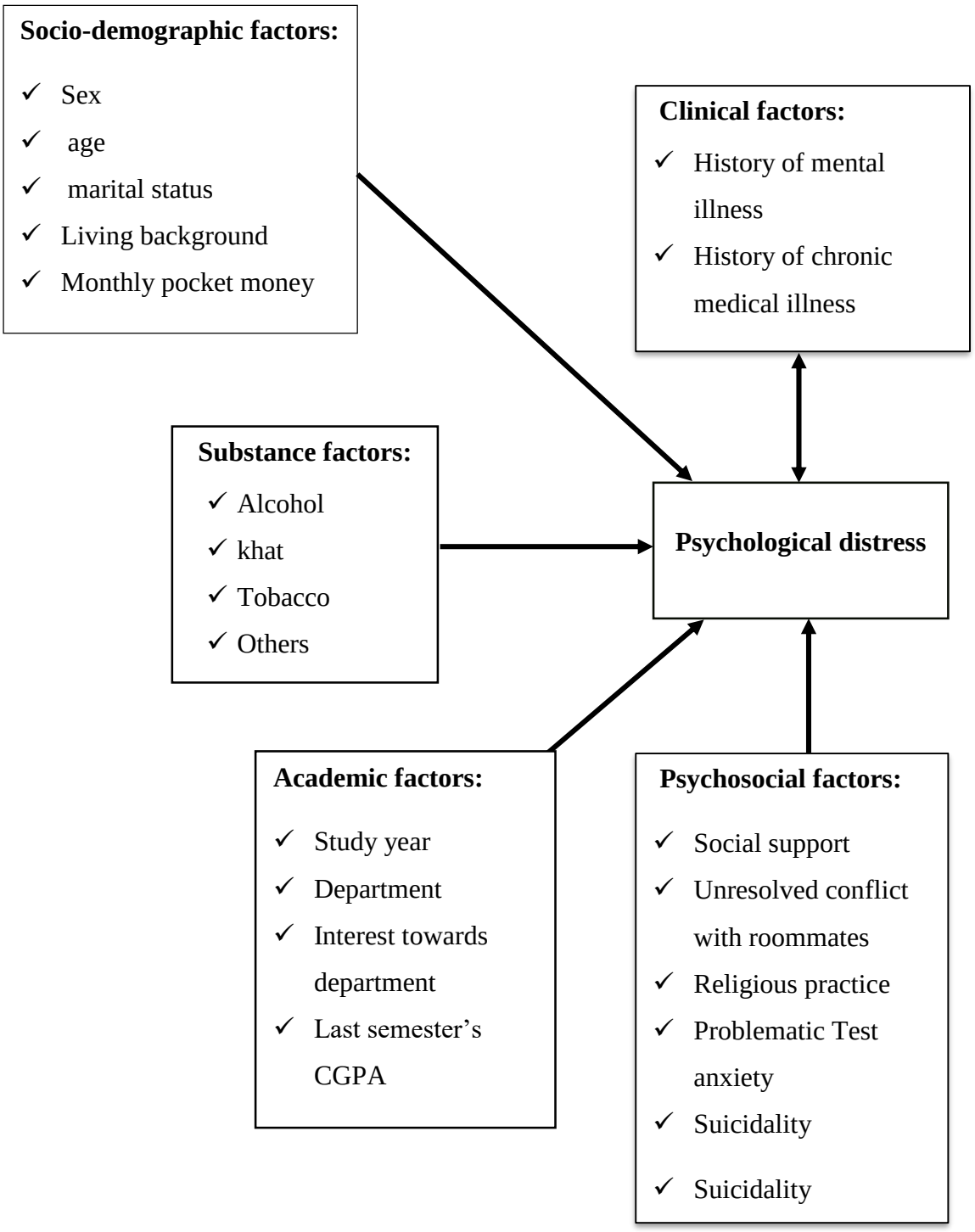


Figure 1: Conceptual frame-work that showing possible factors associated to psychological distress among students (18, 27, 30, 54, 60, 61, 62).

3. Objectives

3.1. General objective

- To assess the prevalence, and its associated factors of psychological distress among under graduate medicine and health science students of Bahir Dar University, Northwest Ethiopia, 2024.

3.2. Specific objectives

- To measure the prevalence of psychological distress among undergraduate medicine and health sciences students of Bahir Dar University.
- To identify associated factors for psychological distress among undergraduate medicine and health sciences students of Bahir Dar University.
- To explore students' personal experiences of psychological distress during periods of conflict.

4. Methods and materials

4.1. Study area and period

The research was conducted at Bahir Dar University (BDU), specifically within the College of Medicine and Health Sciences (CMHS), located in Bahir Dar, Ethiopia. Bahir Dar is located 565 kilometers from Addis Ababa. BDU, established in 1963, has expanded to six campuses, with CMHS being the primary institution for training medical professionals. CMHS serves as a hub for medical education, offering undergraduate and graduate programs. The School of Health Sciences encompasses various departments, including Compressive Health Nursing, Midwifery, Medical Laboratory Sciences, Pharmacy, Pediatrics and Child Health, and Emergency and Critical Care Nursing. Additionally, the School of Medicine oversees programs in Medicine, Anesthesia, and Physiotherapy. According to the registrar's office, the total number of undergraduate students in medicine and health sciences registered in 2024 was 1302, distributed across the aforementioned departments. The study was conducted from April 01, to December 30, 2024 G.C.

4.2. Study approach

Institutional based convergent mixed methods were conducted among undergraduate Medicine and health science students of BDU.

4.3. Quantitative methods

4.3.1. Study design

Institutional based cross-sectional study was applied among under graduate students of Bahir Dar University to assess the magnitude and its associated factors of psychological distress.

4.3.2. Population

4.3.2.1. Source Population

All undergraduate medicine and health sciences students of Bahir Dar University, 2024

4.3.2.2. Study Population

All selected undergraduate students in medicine and health sciences at BDU, 2024

4.3.2.3. Study Unit

An individual undergraduate student in Medicine and Health Sciences who, was selected for the study

4.3.3. Eligibility criteria

4.3.3.1. Inclusion Criteria

Undergraduate students at CMHS, BDU who were willing to participate.

4.3.3.2. Exclusion Criteria

Students who aged below 18 years old and critically ill during data collection period

4.3.4. Sample size determination

The sample size was determined by using a single population proportion by taking the prevalence of mental distress 49.1% a study reported from Hawassa University (27). With; 5% margin of error, 95% confidence interval formula as follows;

$$n = \frac{(Z_{\alpha/2})^2 p(1-p)}{d^2}$$

Where d = margin of error

Z = level of confidence (95%) = 1.96

p= population proportion\

$$n = \frac{(1.96)^2 \times (0.491 \times 0.509)}{(0.05)^2}$$

$$n = 384.035$$

Adding 10% nonresponse rate total number samples will be **424**.

The sample size for the second specific objective was calculated by using Open Epi info Version 7.4.3.2 by considering the following assumptions; CI=95%, power=80%, the ratio of unexposed to exposed =1:1, COR is taken 2 to get highest sample size, percent outcome in the exposed (P_1) and unexposed (P_2) groups. The sample size for the second objective was calculated as follows.

Table 1: Sample size calculation for the second objective (Epi- info. factor analysis)

Variables	Percent outcome(P_1 and P_2) in exposed and unexposed groups	Total sample size with 10% nonresponse rate
Female sex	P_1= 40.0%, P_2=25%	363
Alcohol drinking	P_1= 46.2%, P_2=30%	337
low monthly pocket money	P_1= 32.6%, P_2=19.5%	418

Since sample size of the first objective is greater than the second so final sample size was **424.**

4.3.5. Sampling technique and procedure

Stratified random sampling technique was used in which firstly, students were categorized by department and study year, and then subjects for study were randomly selected from each category in proportion to its size. Number of sample size from each stratum was calculated using:

$$n_j = \frac{n}{N} N_j$$

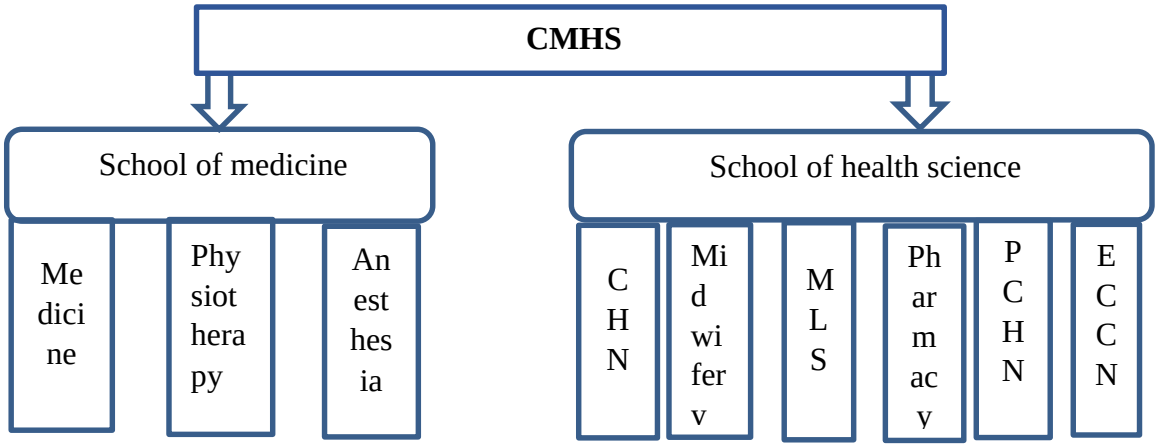
Where n_j is sample size of the j^{th} stratum

N_j is population size of the j^{th} stratum

n is total sample size

N is total no. of study population

So finally by adding all samples from each stratum we were got the grand total **(424).**



Note : CHN= Compressive Health Nursing**, MLS=** Medical Laboratory Sciences**, PCHN=** Pediatrics and Child Health **Nursing, ECCN=** Emergency and Critical Care Nursing

Figure 2: Schematic presentation of sampling technique of CMHS student at BDU, 2024

Table 2: Proportional allocation of students in their department and study year

Departments	Year of study					
	1st	2nd	3rd	4th	5th	6th
Medicine =547	87 (28)	59 (19)	112(36)	88(29)	103(34)	98(32)
Anesthesia =104	-	50(16)	24(8)	30(10)	-	-
Physiotherapy=88	-	50(16)	19(6)	19(6)	-	-
CHN=90	-	37(12)	28(9)	25(8)	-	-
Midwifery=89	-	36(12)	29(9)	24(8)	-	-
ML=95	-	30(10)	24(8)	41(13)	-	-
Pharmacy =149		40(13)	31(10)	40(13)	38(12)	-
PCHN=81	-	30(10)	24(8)	27(9)	-	-
ECCN=59	-	20(7)	20(7)	19(6)	-	-
Total N=**1302**	424					

Key: - Numbers written in red color were actually collected data.

4.3.6. Variables

4.3.6.1. Dependent variable

- Psychological distress(Yes/No)

4.3.6.2. Independent variables

Socio-demographic factors:

- Age
- Sex
- Religion
- Marital status
- Living background
- Monthly pocket money

Academics factors:

- Year of study
- Department
- Interest towards current department
- Last semester CGPA

Psychosocial factors:

- Religious practice

- Relationship with roommate
- Conflict with friends
- Financial distress
- Social support
- Problematic test anxiety
- Suicidality

Substance and behavioral factors:

- Alcohol
- khat
- Cigarette smoking
- Others

Clinical factors:

- Family history of mental illness
- History of known chronic medical illness

4.3.7. Operational definitions

- **Psychological distress:** In this study, due to the small number in each of the categories 10 item Kessler psychological distress scale, the scores were dichotomized into those who scored<20 (absence of psychological distress) and those who scored ≥20 (presence of psychological distress) (63).
- **Social support**: Support at a time when difficulties and critical conditions like social and psychological assessed by Oslo -3 scales which has a total of 14 scores & classified into three broad categories:- Poor support: 3– 8, Moderate support: 9–11 and Strong support: 12–14 (64).
- **Problematic test anxiety:** Students who scored 30-34 "Moderately high" ,35-39 "High test anxiety" ,40-50 "Extremely high anxiety" Westside Test Anxiety inventory(WTAI) (65).
- **Substance use**

  Current use- using at least one of any specific substance for non-medical purpose within the last three months (alcohol, khat, tobacco, others),

  Ever use- using at least one of any specific substance for a non-medical purpose at least once in a lifetime (alcohol, khat, tobacco, others) (66).
- **Suicidal behavior:** Studnts who scored ≥ 7 in Suicidal behavior questionnaire's-Revised (SBQ-R); with cut-off point of ≥ 7 were at high risk of suicide (67).

4.3.8. Data collection tool and procedure

Data were collected from Bahir Dar University, CMHS, trough interview guided semi-structured questionnaire having eight parts, the first containing socio-demographic information in which it includes the general socio-demographic information of the participants. The remaining part of the questionnaire was containing academic information, problematic test anxiety, psychological distress, substance use, social support, psychosocial and clinical factors, and suicidal behavior respectively. Socio-demographic and related factors were developed by reviewing different literatures.

Kessler Psychological Distress Scale (K-10): was used to assess psychological distress; the outcome variable with cut-off point ≥20 with sensitivity of 84.2% and specificity 77.8%. The K10 is a widely used tool to assess Psychological distress in the preceding one month. Each item is rated from 1 to 5, from "none at all" to "all the time". The total score for the 10-item scale is 50, ranging from 10 to 50. Respondents were asked about experiencing symptoms of psychological distress over the past 1 month. In this study, a study respondent who scored 20 and above were considered as having psychological distress. It has been investigated and confirmed that K10 scale had excellent internal consistency reliability, (Cronbach's alpha of 0.93) and in this study k-10 had. Both the 10-item and 6-item versions (K10 and K6) were validated in Ethiopia, with the 10-item version showing superior validity (63, 68). Additionally, the scale's value for internal consistency, based on a 10-item standard, was found to be 0.800 in this study, further confirming its reliability as a tool for assessing psychological distress.

Westside Test Anxiety Inventory: Test anxiety was assessed using WTAI; a self-reported questionnaire of 10 statements with each response is scored with a 5-point Likert scale (1-5) yielding a total test anxiety score ranging from 10 to 50 points. Westside scale combines six items assessing impairment and four items on worry and dread related to exams. 30-34 moderately high test anxiety,35-39 High test anxiety and 40-50 extremely high anxiety. The tool was used among medical students in Addis Ababa with internal consistency of very high (Cronbach's alpha=0.94) (65).

substance use factors : Substance use was assessed by ASSIST questionnaire which comprises of substance use for its assessment which is current use and ever use were adapted from the ASSIST (Alcohol, Smoking, and Substance Involvement Screening Test), a well-validated instrument developed by the World Health Organization (WHO) were used (66).

Social support: Social support of the students were assessed by using Oslo-3 social support scale which ranges from 3-14, those respondents who were scored "3–8" is considered as having poor social support, score "9–11" moderate social support and score "12-14" as having strong social support. Reliability of Cronbach's alpha=0.91 (64).

Clinical factors: History of known chronic medical and mental illness, family history of mental illness were assessed by yes/no questions.

Suicidal behavior: Suicidal behavior among students were assessed by Suicide Behaviors Questionnaire-Revised (SBQ-R) tool with Cronbach's alpha score of 0.88 in the Ethiopian validation study, indicating a high level of internal consistency reliability. The sensitivity and specificity of the SBQR tool in the Ethiopian validation study were reported 86% and 92% respectively (67).

4.3.9. Data quality control

To ensure the quality of the data, a well-designed questionnaire and standardized data collection tools were developed. Data were collected by four BSc psychiatry professionals, with supervision provided by supervisors. A two-day training session, conducted two weeks before the data collection period, covered the content of the questionnaires, data collection procedures, and other pertinent subjects. The questionnaires were translated into the local language, Amharic, to enhance participant understanding, and then back-translated into English to verify accuracy. Before the actual data collection, a pretest was conducted with 5% of the sample size (22 individuals) at Bahir Dar University Zenzelma Campus. Although no significant feedback was received during the pretest phase, the investigator carefully reviewed the data and addressed any identified issues promptly, implementing corrective measures as needed. Throughout the course of the data collection, data collectors were supervised, regular meetings were held between the data collector, supervisor, and the principal investigator together in which problematic issues arising during the data collection by the students to be discussed and corrected. The collected data was reviewed and checked for completeness before data entry; the incomplete data was discarded. Data entry format template was produced and programmed.

4.3.10. Data processing and analysis

The data were checked, entered and cleaned using Epi data Software version 4.6.02 and was exported to SPSS (Statistical Package for Social science) version 27. Then, the socio-demographic characteristics and other factors of respondents were analyzed by descriptive

statistics frequency, percentages, (mean, and standard deviations). Model fitness was assessed using the Hosmer-Lemeshow test, wwith significance value of 0.9, indicating that the model fits the data well. Multicollinearity among the independent variables was checked using Variance Inflation Factor (VIF) values, which ranged from 1.115 to 2.454. These results suggest that most variables have minimal multicollinearity.

Bivariate logistic regression analysis was performed to find the association of each independent variable with the outcome variables. All variables with a p-value of ≤ 0.25 at bivariate logistic regression analysis were entered into the multivariable logistic regression model. Adjusted odds ratio (AOR) with 95% confidence interval (CI) was calculated for variables having p-value less than 0.05 in multivariable logistic regression models were considered as significantly associated with the dependent variable. Results are presented in the form of table, figures & chart using frequency & summary statistics such as mean, & percentage to describe the study population in relation to relative variables and discussed with previous results.

4.4. Qualitative methods

4.4.1. Study design

A phenomenological qualitative design was employed. It centers on understanding how the students experienced and made sense of their lived experiences in the context of conflict. From a phenomenological perspective, the focus would be on the essence of their subjective experiences how they perceived the trauma, distress, and emotional responses during periods of war.

4.4.2. Study participants

Eight (8) in-depth interviews were conducted with students who had direct exposure to conflict. Participants were purposively selected from specific colleges within the university, ensuring they had firsthand experiences of these distressing events, such as nighttime explosions, gunfire, and a direct shooting incident on their bus. Each participant was contacted directly, and the interviews continued until data saturation was achieved. Saturation was determined, typically reached after 8-10 interviews (69).

4.4.3 Sampling methods

A purposive sampling method was used to select undergraduate students with direct exposure to conflict, particularly those whose experiences offered valuable insights into their psychological distress, stressors, emotional reactions, and coping mechanisms during periods of war. This approach was relevant as the participants had encountered severe and ongoing conflict-related incidents. While living on campus, they experienced frequent nighttime explosions and gunfire, which created an environment marked by constant fear and insecurity. After moving to a new campus, they faced further trauma when their bus, carrying [around 50] individuals and traveling to the university hospital, was struck by gunfire. These intense experiences deeply influenced their responses and perspectives, making them ideal candidates for the study. The participants' K-10 scores indicated varying levels of psychological distress, with scores ranging from [24-28], reflecting the impact of their experiences. Data collection continued until saturation was reached, meaning no new themes or information emerged, ensuring a thorough understanding of their lived experiences.

4.4.4. Eligibility criteria

4.4.4.1. Inclusion criteria

Undergraduate medicine and health science students of BDU, who had direct exposure to conflict and given verbal consent to participate in the study

4.4.4.2. Exclusion criteria

Seriously ill students, who were unable to fully engage in the interview process,

4.4.5. Data collection tools and procedure

The Researcher conducted face-to-face interviews with participants selected based on their availability. The interview questions were carefully designed to align with the study's objectives, drawing from existing literature and addressing key themes such as specific conflict situations, emotional impacts, challenges, and coping strategies. A semi-structured interview guide containing open-ended questions explored participants' socio-demographic characteristics, experiences of emotional distress during conflict, and strategies for coping. For example, questions included, "Could you describe a specific conflict or stressful situation you encountered during your studies? How did it affect your mental health and emotional well-being?" and "What strategies do you use to cope with the stress and challenges you

face?". The interviews, conducted in Amharic language by the principal investigator in secretive, quiet settings within the college, ensured participants felt safe and undisturbed. Verbal consent was obtained before recording the sessions, and detailed notes were taken. Audio recordings were transcribed verbatim on the same day to preserve accuracy and validity, forming the primary data for qualitative analysis.

4.4.6. Data analysis

Descriptive statistics were used to summarize the socio-demographic details of the participants, while thematic analysis was employed by using Atlas. ti version WIN 7.5. The analysis began during data collection and followed a systematic process. First, audio recordings of the interviews were transcribed verbatim and translated from Amharic to English to preserve the authenticity of participants' responses. Next, the data were systematically coded to identify meaningful patterns. These codes were then reviewed for clarity and combined into broader themes that captured the core aspects of the data. The themes were refined and categorized to ensure they accurately reflected the participants' experiences and aligned with the study's objectives. Finally, the researcher synthesized the findings into a coherent narrative, supported by direct quotes from the participants, to present the analyzed data comprehensively (70).

4.12. Ethical consideration

Ethical clearance was obtained from institutional review board (IRB) of college of medicine and health sciences, Bahir Dar University with (IRB 01-008: 004/2024). Detail information about the study was given to all study participants in the information sheet; after they were asked for consent and agreed on that informed consent was obtained from each participant before they proceed to responding to questionnaires. Study participants have the right not to participate in the study and even to withdraw in between. The privacy of study participants and confidentiality of the information were kept at every stage of data processing by excluding any personal identifiers in the questionnaire.

5. Results

5.1. Quantitative data results

From a total of 424 respondents sampled for the study, 407 (96.0%) of them completed data.

5.1.1. Socio-demographic characteristics of students

Of the total respondents, 235 (57.7%) were male students; age range from 18 to 26 years and the mean age of respondents was 22.69 years (SD±1.81). Most of the respondents 353 (86.7%) were single and 261 (64.1%) were Orthodox religion followers. The majority, 277 (68.1%) study participants from urban areas of Ethiopia, and 221 (54.3%) of the participants get a pocket money >1000 Ethiopian Birr (ETB) (Table3).

Table 3: Frequency and Percentage Distribution of Socio-demographic Characteristics of Bahir Dar University undergraduate medical and health science students, Ethiopia, 2024

Variables	**Categories**	**Frequency(n=407)**	**Percentage (%)**
Age	<=22	207	50.9
	>22	200	49.1
Sex	Female	172	42.3
	Male	235	57.7
Marital status	Single	355	87.2
	In romantic relationship	52	12.8
Religion	Orthodox	261	64.1
	Muslim	64	15.7
	Protestant	72	17.7
	Others*	10	2.5
Living background	Rural	130	31.9
	Urban	277	68.1
Monthly pocket money (in Birr)	250-500	23	5.7
	501-750	77	18.9
	751-1000	86	21.1
	>1000	221	54.3

Note: * Catholic, and Adventism

5.1.2. Academic characteristics

One hundred sixty six (40.8%) of study participants from fourth-year and above, followed by 113 (27.8%) of them were second-year. About 170 (41.8%) were from the Medicine department, followed by students from Pharmacy 47 (11.5%) and 34 (8.4 %%) were from Anesthesia department. Most of participants 332 (81.6%) were joined their field of study by own choice and 307 (75.4%) participants had an interest towards their study department currently. One hundred twenty three (30.2%) of participants have a cumulative grade point average (CGPA) score range between 2.51 and 2.99 (Table 4).

Table 4: Frequency and Percentage Distribution of academic Characteristics of Bahir Dar University undergraduate medical and health science students, Ethiopia, 2024

Variables	**Categories**	**Frequency(n=407)**	**Percentage (%)**
Year of study	1st year	27	6.6
	2nd year	113	27.8
	3rd year	101	24.8
	4th year and above	166	40.8
Study departments	Medicine	170	41.8
	Anesthesia	34	8.4
	Physiotherapy	27	6.6
	CHN	27	6.6
	ML	30	7.4
	Midwifery	28	6.9
	PCHN	25	6.1
	ECCN	19	4.7
	Pharmacy	47	11.5
Interest towards current department	Yes	307	75.4
	No	100	24.6
Last semester's CGPA	2.00-2.49	94	23.1
	2.50-2.99	123	30.2
	3.00-3.49	119	29.2
	3.50-4.00	71	17.4

5.1.3. Psychosocial and clinical characteristics of study participants

Two hundred and twenty five (55.3%) of the study participants sometimes participated in religious practices. About 80 (19.7%) participants had unresolved conflict with their friends. About 40 (9.8%) and 34 (8.4%) of respondents had family history of mental illness and known chronic medical illness respectively. Most of study participants 210 (51.6%) had moderate social support and 61 (15%) of participants had high risk of suicidal behaviors (Table 5).

Table 5: Distribution of psychosocial and clinical characteristics of medical and health science students' of Bahir Dar University, 2024 (n=407).

Variables	**Categories**	**Frequency(n=407)**	**Percent (%)**
Frequency of attending religious practice	Always	134	32.9
	Sometimes	225	55.3
	Not at all	48	11.8
Relationship with roommate	Very good	119	29.2
	Good	196	48.2
	Not satisfactory	92	22.6
Unresolved conflict with friends/roommate	Yes	80	19.7
	No	327	80.3
Facing financial problem	Yes	169	41.5
	No	238	58.5
Family history of mental illness	Yes	40	9.8
	No	367	90.2
History of known chronic medical illness	Yes	34	8.4
	No	373	91.6
Social support	Poor	110	27.0
	Moderate	210	51.6
	Strong	87	21.4
Suicidal behaviors	Risk for suicidal behavior	61	15.0
	No risk for suicidal behaviors	346	85.0

Problematic test anxiety

Regarding to problematic test anxiety most of the participants 280 (68.8%) had no problematic test anxiety and 40(9.8%) participants had extremely high test anxiety (figure 3).

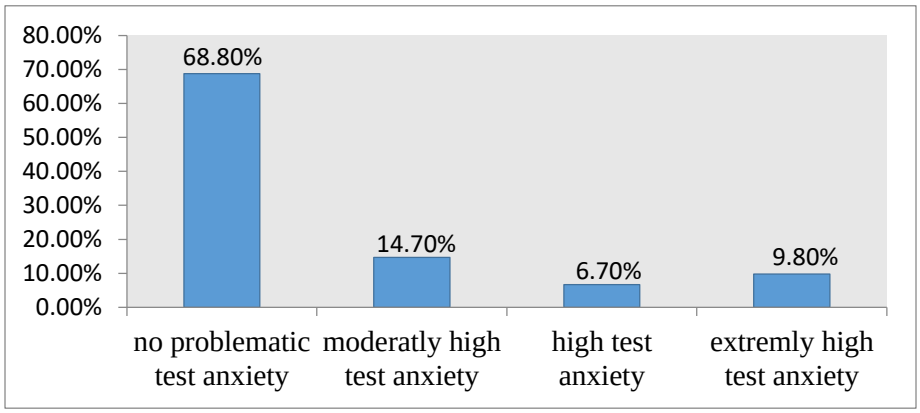


Figure 3: Level of problematic test anxiety of under graduate medical and health science students of Bahir Dar University, Ethiopia, 2024

5.1.4. Substance and behavioral characteristics of study participants

The majority of participants 115(28.3%) used alcohol in their life and followed by 30(7.4%) of students used khat. One hundred and six (26%) and 30 (7.4%) of the study participants used alcohol, and khat currently or three month ago respectively (Table 6).

Table 6: Distribution of substance and rellated behavior of under graduate medical and health science students of Bahir Dar University, Ethiopia, 2024

Variable	**Categories**	**Frequency(n=407)**	**Percent (%)**
Have you ever used alcohol in your life?	Yes	115	28.3
	No	292	71.7
Have you ever used alcohol currently or in the last 3 months?	Yes	106	26
	No	301	74
Have you ever used khat in your life?	Yes	30	7.4
	No	377	92.6
Have you ever used khat currently or in last 3 months?	Yes	30	7.4
	No	377	92.6
Have you ever used cigarette in your life?	Yes	20	4.9
	No	387	95.1
Have you ever used cigarette currently or in last 3 month?	Yes	24	5.9
	No	383	94.1
Have you ever used other* substance in your life?	Yes	31	7.6
	No	376	92.4
Have you ever used other* substance currently or in last 3 months?	Yes	27	6.6
	No	380	93.4

Note: *cannabis/shisha

5.1.5. Prevalence of psychological distress

In this study, the overall prevalence of psychological distress among undergraduate medical and health science students by using K-10, with a cut-off point 20 and above was 199 (48.9%) with 95% CI (43.8, 53.7).

5.1.6. Factors associated with psychological distress

In bi-variable logistic regression sex, living back ground, last semester CGPA, facing financial problem, frequency of religious practices, relationship with friends/roommate, unresolved conflict with roommate, interest towards the department, family history of mental illness, known chronic medical illness ,problematic test anxiety, social support, and suicidal behavior were associated (p-value<0.25) with psychological distress among under graduate medical and health science students of BDU. In multivariable analysis being female sex, rural background, lower last semester CGPA, not participate in religious practice at all, lack of interest towards department, has family history of mental illness, problematic test anxiety, and poor social support were associated with psychological distress ($p<0.05$). The odds of developing psychological distress were 2.4 times more likely with females when compared to males (AOR=2.4, 95% CI=1.0-2.6), the odd of having psychological distress among students who scored lower CGPA(2.00-2.49) 2.8 times higher than those who scored 3.50-4.00 (AOR=2.8, 95%CI= 1.3, 5.7), and students who had rural living back ground were 1.7 times more likely to have psychological distress as compared to their counterparts (AOR=1.7, 95%CI=1.0, 2.9).

The odd of having psychological distress 2.7 times more likely with those who did not participate in religious practice at all than their counterpart (AOR=2.7, 95%CI=1.1, 6.5),the odd of having psychological distress among those who had lack of interest towards their departments were 5 times higher than their counterparts (AOR=5.0, 95% CI=2.7, 9.2), The odds of having psychological distress are 6 times more likely with those who had family history of mental illness than those who had not(AOR=6.1, 95CI=2.8, 13.0), the odd of having PD among those had extremely high test anxiety were 6 times higher than who had no problematic test anxiety (AOR=6.0, 95%CI 2.5, 14.6), and students with poor social support (AOR=3.8, 95%CI=1.6, 4.7) were 3.8 times more likely to have psychological distress compared to that of students with strong social support (Table 7).

Table 7: Bi-variable and Multi-variable Logistic Regression Analysis Showing Significant Predictors of Psychological Distress among undergraduate medical and health science students of Bahir Dar University, Ethiopia, 2024

Variables	**Categories**	**Psychological distress**		**95%CI**	
		Yes	No	COR	AOR
Sex	Female	102	70	2.07 (1.30 -3.01)	**2.40 (1.09-2.60)*** **
	Male	97	138	1	1
Living background	Rural	77	53	1.80 (1.20 -2.80)	**1.75 (1.06-2.90)** **
	Urban	122	155	1	1
Last semester CGPA	2.00-2.49	53	41	3.53 (1.82-6.80)	**2.81 (1.30-5.70)** **
	2.50-2.99	73	50	3.99 (0.91-2.60)	3.59 (0.80 - 2.80)
	3.00-3.49	54	65	2.27 (0.80 -1.50)	2.05 (0.46 -1.50)
	3.50-4.00	19	52	1	1
Facing financial problem	Yes	98	71	1.87 (1.20 -2.70)	1.96 (0.87-4.58)
	No	101	137	1	1
Frequency of religious practice	Always	57	77	1	1
	Sometimes	111	114	1.31 (0.91 -3.50)	1.05 (0.77 -3.50)
	Not at all	31	17	2.46 (1.20-4.80)	**2.79(1.10 - 6.50)** **
Interest towards department	Yes	120	187	1	1
	No	79	21	5.86 (3.40 -9.90)	**5.08 (2.70 -9.20)*** **
Family h_x of MI	Yes	46	13	4.51 (2.30 -8.60)	**6.12 (2.80 -13.01)*** **
	No	153	195	1	1
Known chronic medical illness	Yes	26	8	3.75 (1.60-8.50)	2.42 (0.90-6.10)
	No	173	200	1	1
Problematic test anxiety	No	123	157	1	1
	Moderately high	23	37	0.79 (0.50-5.40)	1.50 (0.60 -7.30)
	High	20	7	3.64 (0.80-19.90)	3.26 (0.10-24.00)
	Extremely high	33	7	6.01 (2.50-14.00)	**6.04 (2.50-14.60)*** **
Social support	Poor	76	34	4.24 (2.30-7.70)	**3.83 (1.60 -4.70)*** **
	Moderate	93	117	1.51 (0.72-4.57)	1.03 (0.60 -4.70)
	Strong	30	57	1	1
Suicidal behavior	Yes	47	14	4.28 (2.20-8.00)	1.75(0.70 -5.32)
	No	152	194	1	1

Note: **p<0.05, ***p<0.001 1= reference categories

5.2. Qualitative data results

5.2.1. Participants socio-demographic characterstics

A total of eight Undergraduate medical and health science students of Bahir Dar University were recruited for the qualitative research. Most of participants were male and the mean age was 24.44 (±1.01 SD) ranging from 23-26 years. Regarding to year of the study the majority of study participants were from 4th year and five students were from rural background. The participants were from different study departments (Table 8).

Table 8 : Socio-demographic characteristics of the participants (Qualitative data)

Participants code	Sex	Age	Year of study	Department	Living background
Participant 1	Male	23	4thyear	Midwifery	Urban
Participant 2	Female	23	4thyear	ML	Rural
Participant 3	Male	25	4thyear	CHN	Rural
Participant 4	Male	25	5thyear	Pharmacy	Urban
Participant 5	Female	24	4thyear	PCHN	Rural
Participant 6	Male	26	5thyear	Medicine	Rural
Participant 7	Male	24	4thyear	ECCN	Rural
Participant 8	Female	25	6thyear	Medicine	Urban

5.2.2. Themes

From analysis and coding of in-depth interview data by using ATLAS.ti V-7.5 software, students' personal experiences of psychological distress during period of conflicts have categorized in to four main themes and subcategories under each main themes, as shown in (table 9).

Table 9: Identified themes and categories in-depth interview data

Theme	Description	Categories
Understanding Personal Experiences	Participants described various conflicts, such as hearing explosions or experiencing gunfire, which led to feelings of shock and fear. They shared their immediate reactions and how these events impacted their emotional well-being.	Specific Conflict Situations
		Immediate Reactions
		Long-term Impact of Conflict

Stressors and Challenges	The constant threat of violence was a significant stressor, making it difficult for students to concentrate on their studies. Concerns for family safety added to their anxiety and emotional burden.	Personal Safety Concerns
		Academic Pressure
Emotional State	Participants reported mixed emotions, often oscillating between fear and brief moments of relief. Many felt hopeless about the future and experienced anxiety regarding their safety and that of their loved ones.	Fluctuating Emotions
		Long-term Emotional Impacts
Coping Mechanisms	Students employed various coping strategies, including positive self-talk, seeking support from peers, and engaging in activities like listening to music or playing sports to distract themselves from stress. Meditation and prayer also used by students to distruct their distress.	Positive Strategies
		Engaging in Activities
		Meditation and Religious Practices

Theme I: Understanding Personal Experiences

Understanding personal experiences of conflict were the first theme that have identified by analysis of in-depth interview data, which sheds light on the psychological impact of conflict. Within this main theme, three categories have identified.

Specific Conflict Situations

Participants' vivid descriptions of conflict, such as gunfire and explosions, illustrate the unpredictable and intrusive nature of violence in their academic and personal lives. These incidents disrupt the normalcy of education and create a pervasive sense of danger. Participants noted as:

> *"Recently, during a time of conflict, we heard several explosions at night. There were explosions and gun fire while we were at campus in sebatamit, and this made many students extremely scared." [Participant 1, 4th year, 23 years old]*

> *"During my studies, I felt an overwhelming amount of stress because of the ongoing war, especially when we were in the Sebatamit compound. We were always worried*

about violence and what might happen next. This situation really affected our education and our overall well-being." [Participant 2, 4th year, 23 years old]

Other respondents were similarly shared a traumatic incident as:

"*The most serious conflict I faced during my studies happened when there was a shooting on the bus while we were traveling to hospital for clinical practice. It was a very shocking situation that caught us by surprise." [Participant 3, 4th year, 25 years old]*

"During my time on campus, we faced a terrifying situation when armed forces attacked us. We heard gunfire and explosions, which left us all very scared and traumatized." [Participant 6, 5th year, 25 years old]

These experiences highlight the high prevalence of violent situations affecting students' daily lives, contributing significantly to their emotional distress.

Immediate Reactions

The findings reveal that most participants experienced immediate and intense emotional and physical reactions to traumatic events, characterized predominantly by shock, fear, and panic. The overwhelming nature of these responses often left students immobilized or seeking immediate safety. Participant described from their experience:

"When the conflict got worse, I was studying with friends when suddenly we heard gunfire around 2:00 PM. We ran to the bathroom for safety... Many students were scared; some were lying on the floor, and others were in shock." [Participant 2, 4th year, 23 years old]

"When the shooting happened, I was in complete shock. I fell inside the bus and couldn't understand what was going on." [Participant 3, 4th year, 25 years old]

In addition, participants stated this panic was compounded by feelings of helplessness, as expressed by another respondents as:

"During my time on campus, we faced a terrifying situation when armed forces attacked us... We heard gunfire and explosions, which left us all very scared and traumatized" [Participant 6, 5th year, 26 years old]

"The panic was overwhelming; I just wanted to hide somewhere safe." [Participant 2, 4th year, 24 years old]

Some of the participants also reported immediate physical reactions included students falling to the ground in shock or fleeing to find safety. As reported by participants as:

"Some students were studying in the library when the blasts happened, and they were so shocked that they fell to the ground." [Participant 1, 4th year, 23 years old]

"I remember feeling paralyzed with fear; it took me a moment to process what was happening around me." [Participant 4, 5th year, 25 years old]

Long-term Impact of Conflict

The emotional impacts of conflict were not limited to immediate reactions but extended long after specific traumatic events. Some participants indicated persistent feelings of despair and emotional exhaustion. A participant reflected,

"The conflict seriously affected my mental health. I often felt overwhelmed and anxious, especially when I couldn't contact my family or access basic services like banks, networks and transportation." [Participant 5, 4th year, 24 years old]

Other participants also expressed feelings of hopelessness:

"I often felt hopeless about the situation and wondered if things would ever go back to normal" [Participant 8, 6th year, 26 years old]

"It changed how I viewed life; I became more anxious about everything around me." [Participant 2, 4th year, 23 years old]

These statements illustrate the prolonged emotional and psychological toll of conflict, indicating a sustained prevalence of distress

Theme II: Stressors and Challenges

The second theme that was identified from analysis of in-depth interview data was stressors and challenges making participants distress. Within this main theme two categories were identified.

Academic Pressure

Many participants expressed that the constant threat of violence, along with the added pressures of crowded schedules and the disruption caused by the COVID-19 pandemic, contributed to heightened anxiety and stress. Several students reported difficulty concentrating on their work, as thoughts of violence would often interrupt their study sessions, leaving them feeling overwhelmed and sometimes unable to focus.These finding was evident with the following responses:

> *"The constant threat of violence is a big source of stress for us. It makes it hard to focus on our studies and reduces our motivation to read or do our work"[Participant 1, 4th year, 23 years old]*
>
> *"The situation happened, which created crowded and overload schedule and heightened our anxiety by made worse the COVID-19 pandemic effect on our study." [Participant 5, 4th year, 24 years old]*
>
> *"The biggest stressor was the fear of violence interrupting our studies" [Participant 2, 4th year, 23 years old]*
>
> *"I found it incredibly difficult to keep up with my studies because every time I tried to concentrate, thoughts of violence would creep in." [Participant 3, 4th year, 25 years old]*
>
> *"With everything going on around us, it felt pointless to study sometimes; how could we focus?" [Participant 3, 4th year, 25 years old]*

Personal Safety Concerns

The findings revealed that some of the participants identified Safety concerns were chief in students' minds. In addition, some study participants show this constant worry contributed to a tense environment that hindered their ability to learn effectively. This finding was manifested by the following sample responses:

> *"It's hard to concentrate on my studies when I'm worried about my safety and that of my classmates."* [*Participant 3, 4th year, 25 years old]*
>
> *"My friends were especially anxious because they had never experienced such conflict before; they were terrified by the sounds of gunfire and explosions."* [*Participant 1, 4th year, 23 years old]*
>
> *"I often found myself checking news updates just to see if there were any new threats or attacks nearby."* [*Participant 8, 4th year, 25 years old]*

"Seeing violence affects our ability to focus on our studies and make us feel insecure," [Participant 6, 5th year, 26 years old]

Theme III: Emotional State

The third theme that emerged from analysis of in-depth interview data was emotional state of participates. Within this main theme, two categories emerged.

Fluctuating Emotions

The participants described experiencing fluctuating emotions during the conflict, with feelings that shifted rapidly between fear, numbness, relief, and overwhelming stress. Many felt as though they were on an "emotional rollercoaster," struggling to cope with the unpredictable and chaotic nature of their surroundings. Some expressed a sense of emotional detachment, particularly during traumatic events like shootings, where they found it hard to process what was happening. These emotional fluctuations, marked by alternating periods of intense fear and emotional numbness, contributed significantly to the psychological distress reported by students. For example, participants shared:

"My emotions went up and down between fear and brief moments of relief... ohhh... it was exhausting*" [Participant 1, 4th year, 23 years old]*

"I felt like I was on an emotional rollercoaster; one moment I was terrified, and the next I was just numb." *[Participant 2, 4th year, 23 years old]*

"Sometimes I would just sit in silence, feeling overwhelmed by everything..... It was hard to shake off that feeling." [Participant 3, 4th year, 25 years old]

"*On the day of the shooting, I felt detached; it was difficult to process what had happened in all the chaos*"*[Participant 4, 5th year, 25 years old]*

Long-term Emotional Impacts

Some of the respondents indicated the emotional ring from these experiences remained long after specific incidents. Participants expressed feelings of despair, Sample responses encompass:

"I struggled with feelings of sadness over how normal life had changed for us due to the conflict..... it felt like we lost a part of ourselves." [Participant 4, 5th year, 25 years old]

While other participants mentioned ongoing anxiety:

"The constant anxiety about my safety and my friends' safety left me feeling drained and emotionally exhausted." [Participant 5, 4th year, 24 years old]

"Even small noises would trigger anxiety; it's like I'm always waiting for something bad to happen....." [Participant 8, 6th year, 25 years old]

Theme IV: Coping Mechanisms

The fourth theme that was identified from analysis of in-depth interview data was coping methods, focusing on the strategies participants used to manage distress and protect their mental health in conflict-affected environments. Within this main theme, three categories identified.

Positive Strategies

Some participants emphasized the importance of maintaining a positive outlook to cope with the challenges they faced. Others highlighted the significance of helping friends manage their stress, creating a supportive community to navigate the turmoil. This was reflected in several responses:

"I tried to stay positive by telling myself that nothing would happen to us as students while we were on campus" [Participant 1, 4th year, 23 years old]

"We often reminded each other that we needed to stay strong for one another." [Participant 3, 4th year, 25 years old]

"I tried to help my friends who had never experienced war by sharing my own experiences." [Participant 2, 4th year, 23 years old]

Engaging in Activities

Participants also reported engaging in various activities to distract themselves from the stress of their surroundings. These activities, which ranged from casual conversations over coffee to playing sports, served as outlets for emotional relief. Sample responses included:

"*Finding time for fun activities like coffee time, playing games, walking around green areas became crucial for our mental health*." *[Participant 8, 6th year, 25 years old]*

"We listened to music, played sports, watched movies—anything that could help distract us from the stress of our situation" [Participant 2, 4th year, 23 years old]

"We would gather together to watch movies, videos or play games; these moments helped divert us from the chaos outside" *[Participant 5, 4th year, 24 years old]*

Meditation and Religious Practices

For some participants, meditation and religious practices provided a sense of calm and helped manage stress. Meditation and mindfulness allowed students to stay grounded, while prayer and positive self-talk offered spiritual comfort. Respondents reported:

> "*Meditation has been helpful for me—especially shower meditation where I can reflect inwardly*" *[Participant 4, 5th year, 25 years old]*
>
> *"I find comfort in prayer and positive self-talk. Reminding Me that time can heal has been helpful," [Participant 5, 4th year, 24 years old]*
>
> *"Practicing mindfulness helped me stay grounded amid all the chaos." [Participant 6, 5th year, 26 years old]*

6. Discussion

Psychological distress, typically characterized by symptoms of anxiety and depression, significantly affects undergraduate students' mental well-being worldwide. The aims of this study was assesssing the prevalence of psychological distress among undergraduate medical and health sciences students at Bahir Dar University, identify associating factors, and explore students' personal experiences of distress during periods of conflict.

The prevalence of psychological distress among the study participants was found to be 48.9% (95% CI; 43.8, 53.7). This result aligns with findings from other studies in India (53.3%) (42), Brazil (44.7%) (41), Dutch medical students (48%) (45), and Syria (52.6%) (48). However, the prevalence of psychological distress among students in this study was higher than studies done in Adama (21.6%) (53), Jimma (35.2%) (26), and Addis Ababa (32.6%) (54), Ethiopia. This inconsistency may be due to differences in assessment tools. Previous studies used the SRQ-20, with a total score of 20, while the current study employed the K-10, with a total score of 50. Additionally, the participants in the current study may have been repeatedly exposed to ongoing conflict, which could significantly increase their levels of psychological distress (71). Additionally, the qualitative findings from this study highlighted how the ongoing conflict severely affected their mental health, leading to increased anxiety, stress, and fear. The inability to contact family or access basic services intensified their distress. One participant shared their constant worry about violence during their studies, while another recounted a traumatic shooting incident. This increased psychological distress was further emphasized during the interviews, with several participants sharing their experiences, such as:

> *"The conflict seriously affected my mental health. I often felt overwhelmed and anxious, especially when I couldn't contact my family or access basic services like banks, networks, and transportation." [Participant 5, 4th year, 24 years old]*

> *"During my studies, I felt an overwhelming amount of stress because of the ongoing war, especially when we were in the Sebatamit compound. We were always worried about violence and what might happen next." [Participant 2, 4th year, 23 years old]*

Similarly, a traumatic event involving a shooting incident during clinical practice was cited as a major cause of distress:

"The most serious conflict I faced during my studies happened when there was a shooting on the bus while we were traveling to hospital for clinical practice. It was a very shocking situation that caught us by surprise." [Participant 3, 4th year, 25 years old]

The higher prevalence of psychological distress in this study may also be related to the cumulative effects of the COVID-19 pandemic (72). Before the pandemic, about 30% of university students reported symptoms of anxiety and depression (73), but during and after the pandemic, mental health issues escalated. A significant proportion of students reported depression 78%, anxiety 67.9%, and heightened stress 71% due to health concerns and disruptions to their education (74). The pandemic's compounding effects, alongside the conflict, likely contributed to heightened levels of psychological distress, As one participant described:

"The situation happened, which created crowded and overload schedule and heightened our anxiety by making worse the COVID-19 pandemic effect on our study." [Participant 5, 4th year, 24 years old]

While the prevalence in this study is higher compared to countries like northern England 36% (40), India (32.2%) (75), and Pakistan (13.6%) (44). this discrepancy could be due to differences in tools used (e.g., SRQ-20, GHQ) and socio-cultural factors, as well as the setting in Ethiopia. It is important to note that the study setting in conflict-affected regions may have contributed to the higher distress levels observed.

Despite, the prevalence in the current study was lower when compared with studies in Hong Kong, China (87%) (43), Bangladesh, India (54%) (46), and Saudi Arabia (56.3%) (47), This could be due to the difference in socio-economic, cultural and environmental factor in addition to large sample use in China, GHQ-28 item questionnaire use in English and Saudi Arabia because it has also total score of 84 which is more than the total score of 10 item Kessler psychological distress scale. Furthermore, the study setting might be contributed to this variation in which Hong Kong is known to be a stressful city (43).

In case of factors significantly associated with psychological distress, the likelihood of psychological distress in this study was 2.4 times higher among female students. This finding is consistent with previous studies from Hong Kong, China (43), South Karnataka (75), India (42) and also in Ethiopia (4, 26). The possible reasons may be due to factors like their

emotional responses to stress, learned helplessness, and hormonal changes, such as those that occur during menstruation, can contribute to higher levels of psychological distress in females. The interplay between biological factors like hormonal fluctuations and psychosocial factors, including emotional reactions to stress, may explain why women are more susceptible to distress (76). As a result, universities could enhance their existing counseling services by offering stress management workshops focused on emotional regulation, while also raising awareness about how hormonal changes and menstrual health can impact mental well-being.

Students from rural backgrounds were found to be 1.7 times more likely to experience psychological distress compared to their urban peers. This finding aligns with studies conducted in India (42). This may due to rural students often face challenges when transitioning to higher education, such as academic pressure, difficulty adjusting to new environments, smaller social networks, and limited access to extracurricular activities (77). Moreover, students with lower CGPA scores were 2.8 times more likely to report psychological distress, a finding also supported by studies from Hawassa (57). This may due to lower academic performance can lead to stress and feelings of inadequacy, which further exacerbates distress (57). The qualitative data from this study further highlights how academic stress, combined with the fear of failure, contributes to students' distress. Several participants shared their struggles with focusing on their studies due to the ongoing conflict and the mental toll of living in an unpredictable environment. One student described:

> *"I found it incredibly difficult to keep up with my studies because every time I tried to concentrate, thoughts of violence would creep in." [Participant 3, 4th year, 25 years old]*

This suggests that constant anxiety about safety and the impact of conflict on academic performance create a vicious cycle of stress, inadequacy, and hopelessness. To address this, universities could offer targeted resources such as academic tutoring, peer mentoring, and stress management programs to help ease students' transition and reduce their overall stress levels.

Social support plays a crucial role in improving mental and physical health by reducing stress. When social support is lacking, stress can alter the physiological balance of the hypothalamic-pituitary-adrenocortical (HPA) system (78). In this study, participants with inadequate support from significant others were 3.8 times more likely to develop

psychological distress. This finding is consistent with other research from Ethiopia (4, 27). This could be possibly due to the effect of getting insufficient emotional, instrumental and informational support from significant other. The immediate reactions to conflict, such as running to safety or lying on the floor in shock, highlight the intense emotional and physical toll that the absence of a support system can have. In contrast, those who had strong social connections and shared experiences of fear often reported coping better. As participants shared:

> *"We often reminded each other that we needed to stay strong for one another." [Participant 3, 4th year, 25 years old]*

> *"We would gather together to watch movies, videos or play games; these moments helped divert us from the chaos outside" [Participant 5, 4th year, 24 years old]*

This demonstrates that peer networks and community support are crucial for students facing such overwhelming stressors. To address it Institutions should focus on increasing social networks and peer mentorship programs to provide students with the emotional resilience needed during times of crisis.

The likelihood of experiencing psychological distress was found to be approximately six times higher among students with severe test anxiety compared to those without. This aligns with a similar study conducted on Malaysian medical students (79). The underlying cause of this could be poor academic performance and the fear of failure, which may lead to feelings of inadequacy and low self-esteem, contributing to psychological distress. To mitigate this, stress management techniques and confidence-building strategies should be implemented to reduce the risk of distress in these individuals.

Students with a family history of mental illness were six times more likely to develop psychological distress, a finding also supported by previous studies from Ethiopia (4, 26). This could be explained by genetic predisposition and living conditions within the families. In addition, caring for a mentally ill family member may also be an additional stress that contributes to a higher prevalence of psychological distress (51). This implies targeted support, such as counseling that addresses family-related stress and caregiving challenges may benefit.

The study also revealed that students who lacked interest in their academic department were more than five times more likely to experience psychological distress compared to their peers. This finding is consistent with research done in Gondar (4) , and Hawassa (27), of

Ethiopia. This could be reasoned out by studying department without interest prone students to distress and dissatisfaction (4). This was reflected in the qualitative data, where students reported a lack of motivation and engagement in their studies. One participant noted:

> *"I didn't really care about my department, and I was just going through the motions... It was hard to stay motivated in a field I wasn't passionate about." [Participant 2, 4th year, 23 years old]*

The lack of academic interest can lead to dissatisfaction, burnout, and mental fatigue, further exacerbating psychological distress. To address this, it's important to encourage students to explore and engage with their academic interests early on. Providing opportunities for academic exploration, and guidance in choosing a major that aligns with their passions could help reduce distress and improve overall well-being. Additionally, this study also indicated lack of religious practices were 2.7 times more likely to had psychological distress. This result was supported by other study by wolayita sodo (80). This may due to religious practices can provide community support and, engaging in religious activities can provide coping strategies for stress and emotional challenges. It might be noted as:

> *"I find comfort in prayer and positive self-talk. Reminding me that time can heal has been helpful," [Participant 5, 4th year, 24 years old]*

Those who do not practice religion may lack these beneficial coping mechanisms, leading to increased vulnerability to psychological distress (80). This implies that enouraging students engage in meaningful coping practices could help them better manage and reduce distress. The quantitative results from this study align closely with the personal experiences shared by students, highlighting common challenges that contribute to psychological distress. Both the survey data and student testimonies emphasized key issues such as anxiety, stress, and fear resulting from ongoing conflict, lack of social support, academic pressures, and personal struggles. These findings suggest that students' distress arises not only from external factors, such as conflict and academic demands, but also from internal factors, including emotional reactions, test anxiety, and limited social support. By understanding these factors, support systems could be designed to help students build resilience and improve their well-being in difficult circumstances.

7. Strength and limitation

7.1. Strength

This study used a convergent mixed-methods design, enriches the data and strengthens the conclusions drawn from the study.

7.2. Limitation

This study has its own limitations that should be considered when interpreting the results. The most eminent limitation of this study does not provide or confirm the actual cause and effect relationship. Furthermore, the current study lies in the inclusion of both medical and other health science students, as these groups may experience different psychological distress.

8. Conclusions and recommendations

8.1. Conclusions

This study found that nearly half of undergraduate medical and health sciences students experienced psychological distress, initially triggered by shock and fear from surrounding violence, which later manifested as long-term issues like anxiety, hopelessness, and concerns about their future. Key factors linked to this distress included being female, coming from a rural background, low CGPA, high test anxiety, lack of religious practice, disinterest in their department, a family history of mental illness, and poor social support. Despite these challenges, students used coping strategies like positive self-talk, socializing with friends, and engaging in prayer or meditation.

8.2. Recommendations

To University Policymakers

Bahir Dar University should enhance mental health services on campus by providing students with accessible counseling, support groups, and other resources. Efforts to promote these services should ensure they are well-publicized, easily accessible, and available to all students.

To University Staff and Student Union

It is important to introduce mentorship programs like peer to peer support programs and integrate meditation part of extra-curricular activity or prepare periodic session for such practices for such practice.

To City Health Bureaus

It is recommended that you partner with universities to emphasizing the importance of social connections and support systems for young adults, particularly within educational settings.

To Further Research

Longitudinal study should be done to see the cause and effect or temporal relationships of psychological distress and its determinant factors.

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10. Annexes

Annex I. Information Sheet (English version)

Dear participants:

Good morning/ good afternoon? My name is _____. I inform this on behalf of Meseret Tadesse. He is a master's student in Integrated Clinical and Community Mental Health at Bahirdar University, College of medicine and Health Sciences, School of Medicine, Department of psychiatry. I kindly request you to participate in a study that is aimed at to assess the prevalence and associated factors of psychological distress among undergraduate medicine and health science students of Bahir Dar University in 2024.

Title of the research:- psychological distress: prevalence, associated factors and experiences during periods of conflict among undergraduate medicine and health sciences students of bahir dar university, Northwest Ethiopia, 2024

Objective:- To assess the prevalence of psychological distress, its associated factors and to explore students' personal experiences during periods of conflict.among undergraduate medicine and health science students of Bahir Dar University, Northwest Ethiopia, 2024.

Potential Risks: There is no foreseen risk by being participated in this study.

Benefits: no financial benefits are obtained by being participated in this study.

Confidentiality - All the responses and results obtained from participants were kept confidential using coding system whereby no one will have access to your response. Be sure that any part of this study would not be disclosed to third person.

Person to contact- If you have any doubt about this research you could contact the following responsible persons.

1. Meseret Tadesse (Principal investigator)

   Phone No:-+251910996291

   E-mail:-messitadesse9@gmail.com

2. Mrs. Fikir Alemu (MSc, Ass't professor of MH) advisor

   Phone No:- +2518705740

   E-mail:-fikiryashenfal123@gmail.com

Informed consent (English version)

Bahir Dar University

College of medicine and Health Sciences

School of medicine

Department of psychiatry

Good morning/good after noon, my name is _____ I am a BSc psychiatry professional and working as a data collector on behalf of Mr. Meseret Tadesse, who is doing a research titled as "psychological distress: prevalence, associated factors and experiences during periods of conflict among undergraduate medicine and health sciences students of bahir dar university, Northwest Ethiopia, 2024" in partial fulfillment for the Master of integrated clinical and community mental health, College of medicine and Health Sciences, Bahir Dar University.

It would be my pleasure, if you are voluntary to participate in this study. I also want to inform you that there is no any health-related risk by participating in this study. The information you will give is very important and therefore kindly be frank in your responses. I assure you that the information you give will be handled with strict confidentiality and no need to write your name or any other persona identifications here. Your participation in this study is completely voluntary and you can refuse to participate or you are free to withdraw yourself from the study at any time. To complete the questionnaire it would take approximately 10-20 minutes.

Do you agree to participate? Yes ☐ No ☐

Data collector Name _____ signature_____ Date ___/___/_____

Investigator Name _____ Signature _____ Date __/___/___

Yours Faithful

Annex II Questionnaire (English version)

Instruction: Please select the number that contains your response or tell the response for questions that haven't alternatives.

Participant code: ----------

Part I: - Assessment of Socio-demographic characteristic of participants

Q.no	Questions	Responses
101.	Age	____ years
102.	Sex	1. Male 2. Female
103.	Marital status	**1.** Single 3. In romantic relationship **2.** Married 4. Other, specify……..
104.	Religion	**1.** Orthodox 3. Protestant **2.** Muslim 4. Others specify….....
105.	Living background	**1.** Rural 2.Urban
106.	Monthly pocket money (in Birr)	_____birr

Part II: Assessment of Academic characteristics of participants

Q.no	Questions	Responses
201.	Year of study	1.1st year 4. 4th year 2.2nd year 5. 5th year 3.3rd year 6. 6th year
202.	What is your department	1. Medicine 6. Midwifery 2. Aesthesia 7. PCHN 3. Physiotherapy 8. ECCN 4. CHN 9. Pharmacy 5. ML
203.	Last semester's CGPA	----------
204.	Interested to your department currently?	1. Yes 2. No

Part III: Assessment of problematic test anxiety (Westside test anxiety inventory)

A questionnaire of 10 statements to which respondents are asked to report how often they experience anxiety symptoms before, during, and after taking tests each statement response is scored with a 5-point Likert scale (1-5) please put a below the response you chosen.

Q.no	Questions	Extremely or always True(5)	Highly or usually true(4)	Moderately or sometimes true(3)	Slightly or seldom true(2)	Not at all or never true(1)
301.	The closer I am to major exams, the harder it is for me to concentrate on the material.					
302.	When I study, I worry that I will not remember the material on the exam.					
303.	During important exams, I think that I am doing awful or that I may fail.					
304.	I lose focus on important exams, and I cannot remember material that I knew before the exam.					
305.	I finally remember the answer to exam questions after the exam is already over.					
306.	I worry so much before major exams that I am too worn out to do my best on the exam.					
307.	I feel out of sorts or not really myself when I take important exams.					
308.	I find that my mind sometimes wanders when I am taking important exams.					
309.	After an exam, I worry about whether I did well enough.					
310.	I struggle with writing assignments, or avoid them as long as I can. I feel that whatever I do will not be good enough.					

Part IV: Assessment of Psychological distress using K 10

The Kessler Psychological Distress Scale (K10) is a simple measure of psychological distress. The K10 scale involves 10 questions about emotional states with in the last four weeks, each with a five-level response scale. “5” for All the time,” 4” Most of the time,” 3” Some of the time, “2” A little of the time and “1” None of the time.

Q. No.	**Questions**	**All of the time (5)**	**Most of the time (4)**	**Some of the time (3)**	**A little of the time (2)**	**None of the time (1)**
401.	How often did you feel tired out for no good reason?					
402.	How often did you feel nervous?					
403.	How often did you feel so nervous that nothing could calm you down?					
404.	How often did you feel hopeless?					
405.	How often did you feel restless or fidgety?					
406.	How often did you feel so restless you could not sit still?					
407.	How often did you feel depressed?					
408.	How often did you feel that everything was an effort?					
409.	How often did you feel so sad that nothing could cheer you up?					
410.	How often did you feel worthless?					

Part V : Questions to assess substance use.

Q.no.	Questions	Possible answers
501	In your life Have you ever used substance?(for non-medical use only)	**1**.**Yes** **2**.**No**
	If your answer is **yes** for **SUQ**-401 which substance do you use?(**more than one response is possible**)	1.Alcohol 2.Cigarette 3. Khat 4.Others(specify)
502	Currently and in the last three months, Have you ever used substance?(for non-medical use only)	1.yes 2.no
	If your answer is **yes** for **SUQ**-402 which substance do you use?(**more than one response is possible**).	1.Alcohol 2.Cigarette 3. Khat 4.Others(specify)

Part VI: Questions to assess social support (oslo-3)

Q.no	Social Support Questionnaire	Response
601	How many people are so close to you that you can Count on them if you have serious personal problems (choose one option)?	1.None 2.1 or 2 3.3-5 4.More than 5
602	How much concern do people show in what you are doing? (choose one option)	1. No concern 2.Little 3. Uncertain 4. some 5. a lot
603	How easy is it to get practical help from friends or dorm-mates' if you should need it (choose one option)?	1.Very difficult 2.Difficult 3.Possible 4.Easy 5.Very easy

Part VII: Assessment of psychosocial and clinical factors

Q.no	Questions	Possible responses
701.	How often do you participate in religious practices ?	1. Always 2. Sometimes 3. Not at all
702.	Relationship with friends/roommate	1.Very good 2.Good 3.Not satisfactory
703.	Do you have unresolved conflict with your friends or roommate?	1. Yes 2. No
704.	Do you have facing financial strain?	1. Yes 2. No
705.	Do you have Family history of mental illness?	1. Yes 2. No
706.	Do you have past history of mental illness?	1. Yes 2. No
707.	Do you have any known chronic medical illness?	1. Yes 2. No

Part VIII: Suicide Behaviors Questionnaire- Revised (SBQ-R)

Q no.	Question	Response
701	Have you ever thought about or attempted to kill yourself?	(1) Never (2) It was just a brief passing thought (3a) I have had a plan at least once to kill myself but did not try to do it (3b) I have had a plan at least once to kill myself and really wanted to die (4a) I have attempted to kill myself, but did not want to die (4b) I have attempted to kill myself, and really hoped to die
702	How often have you thought about killing yourself in the past year?	(0) Never (1) Rarely (1 time) (2) Sometimes (2 times) (3) Often (3-4 times) (4) Very Often (5 or more times)
703	Have you ever told someone that you were going to commit suicide, or that you might do it?	(1) No (2a) Yes, at one time, but did not really want to die (2b) Yes, at one time, and really wanted to do it (3a) Yes, more than once, but did not want to do it (3b) Yes, more than once, and really wanted to do it
704	How likely is it that you will attempt suicide someday?	(0) Never (1) No chance at all (2) Rather Unlikely (3) Unlikely (4) Likely (5) Rather Likely (6) Very Likely

Annex III. In-depth interview guide (English version)

1. Could you tell me about you're: sex, age, year of study, study department, living background

2. Can you describe a specific conflict or stressful situation you encountered during your studies? What were the circumstances?

3. How did this conflict affect your mental health and emotional well-being?

4. What were your initial reactions or feelings when you faced this situation?

5. As a medical/health sciences student, what are some of the major stressors and challenges you face during this period of conflict?

- It could be things related to your studies, personal safety, or family and friends.

6. Can you describe your overall emotional state and mental well-being during this time? If so, what were they?

- Have you experienced any feelings of anxiety, sadness, fear, anger, or other strong emotions?

7. What strategies do you use to cope with the stress and challenges you face?

- Were there any support systems (friends, family, counselors) that you relied on during this time? How did they help?
- Did you find any particular activities or practices (e.g., exercise, meditation) helpful in managing your stress?

አባሪ IV : የመረጃ ወረቀት (የአማርኛ ቅጂ)

ውድ ተሳታፊዎች፡-

እንደምን አደሩ / ዋሉ የኔ ስም _____። ይህንን በመሰረት ታደሰ ስም አሳውቃለሁ። እሱ በተቀናጀ ክሊኒካል እና የማህበረሰብ የአእምሮ ጤና ውስጥ የማስተርስ ተማሪ ነው።

በባህርዳር ዩኒቨርሲቲ፣የህክምና እና ጤና ሳይንስ ኮሌጅ፣የህክምና ትምህርት ቤት፣የአእምሮ ህክምና ክፍል። በ2024 በባህር ዳር ዩኒቨርሲቲ የቅድመ ምረቃ ህክምና እና የጤና ሳይንስ ተማሪዎች ላይ ያለውን የስነ ልቦና ችግር ስርጭት እና ተያያዥ ጉዳዮችን ለመገምገም የታለመ ጥናት ላይ እንድትሳተፉ በትህትና እጠይቃለሁ።

የጥናቱ ርዕስ፡- በባህር ዳር ዩኒቨርሲቲ የመጀመሪያ ዲግሪ በህክምና እና በጤና ሳይንስ ተማሪዎች ላይ የስነ ልቦና ጭንቀት እና ተያያዥ ምክንያቶች መስፋፋት, 2024.

አላማ፡- የስነ ልቦና ጭንቀትን ስርጭት፣ ተያያዥ ምክንያቶችን ለመገምገም በባህር ዳር ዩኒቨርሲቲ የመጀመሪያ ዲግሪ በህክምና እና በጤና ሳይንስ ተማሪዎች 2024።

ሊሆኑ የሚችሉ አደጋዎች፡ በዚህ ጥናት ውስጥ በመሳተፍ አስቀድሞ የተገመተ አደጋ የለም።

ጥቅማ ጥቅሞች፡ በዚህ ጥናት ውስጥ በመሳተፍ የገንዘብ ጥቅማጥቅሞች አይገኙም።

ምስጢራዊነት - ከተሳታፊዎች የተገኙ ሁሉም ምላሾች እና ውጤቶች ማንም ሰው የእርስዎን ምላሽ ማግኘት በማይችልበት ኮድ ስርዓት በመጠቀም ሚስጥራዊ ይሆናሉ። የዚህ ጥናት የትኛውም ክፍል ለሶስተኛ ሰው እንደማይገለጽ እርግጠኛ ይሁኑ።

የሚያነጋግረው ሰው- በዚህ ጥናት ላይ ጥርጣሬ ካለዎት የሚከተሉትን ኃላፊነት ያላቸውን ሰዎች ማነጋገር ይችላሉ.

1. መሰረት ታደሰ (ዋና መርማሪ)

    ስልክ ቁጥር፡-+251910996291

    ኢሜል፡-messitadesse9@gmail.com

2. ወይዘሮ ፍቅር አለሙ (ኤም.ኤስ.ሲ፣ የኤምኤች ፕሮፌሰር አስስ) አማካሪ

    ስልክ ቁጥር፡- +2518705740

    ኢሜል፡-fikiryashenfal123@gmail.com

አባሪ V : መጠይቅ (የአማርኛ ቅጂ)

መመሪያ፡ እባክህ ምላሽ የያዘውን ቁጥር ምረጡ ወይም አማራጭ ለሌላቸው ጥያቄዎች ላይ ምላሹን ስጡ።

የተሳታፊ ኮድ፡----------

ክፍል I: - የተሳታፊዎች ማህበራዊ-ስነ-ሕዝብ ባህሪ

ተ.ቁ	ጥያቄዎች	አማራጭ
101.	ዕድሜ	____ ዓመታት
102.	ጸታ	1. ወንድ 2. ሴት
103.	የጋብቻ ሁኔታ	1. ያላገባ 3. በፍቅር ግንኙነት ውስጥ 2. ያገባ 4. ሌላ፣ ይግለጹ……
104.	ሃይማኖት	1. ኦርቶዶክስ 3. ፕሮቴስታንት 2. ሙስሊም 4. ሌሎች ይገልፃሉ.....
105.	የኑሮ ዳራ	1. ገጠር 2. ከተማ
106.	ወርሃዊ የኪስ ገንዘብ	_____ብር

ክፍል II፡ የተሳታፊዎች አካዳሚክ ባህሪያት ግምገማ

ተ.ቁ	ጥያቄዎች	አማራጭ
201.	የጥናት አመት	1.1ኛ አመት 4. 4ኛ አመት 2.2ኛ ዓመት 5. 5ኛ ዓመት 3.3ኛ ዓመት 6. 6ኛ ዓመት
202.	የእርስዎ ጥናት ክፍል ምንድን ነው	1. Medicine 6. Midwifery 2. Aesthesia 7. PCHN 3. Physiotherapy 8. ECCN 4. AHN 9. Pharmacy 5. ML
203.	ያለፈው ሴሚስተር CGPA	----------
204.	በአሁኑ ጊዜ በእርስዎ ክፍል ውስጥ ፍላጎት አለዎት?	1. አዎ 2. አይ

ክፍል III፡ የፈተና ጭንቀት ግምገማ (የዌስትሳይድ ፈተና ጭንቀት ክምችት)

ተ.ቁ	ጥያቄዎች	በጣም ወይም ሁልጊዜ እውነት (5)	ከፍተኛ ወይም ብዙ ጊዜ እውነት (4)	በመጠኑ ወይም አንዳንድ ጊዜ እውነት (3)	ትንሽ ወይም አልፎ አልፎ እውነት (2)	በጭራሽ ወይም በጭራሽ እውነት አይደለም (1)
301.	ወደ ዋና ፈተናዎች በቀረብኩ ቁጥር በቁሳቁስ ላይ ማተኮር ይከብደኛል					
302.	በምጠናበት ጊዜ, በፈተናው ላይ ያለውን ቁሳቁስ እንደማላስታውስ እጨነቃለሁ					
303.	በአስፈላጊ ፈተናዎች ወቅት, እኔ አስከፊ እየሠራሁ ነው ወይም ልወድቅ እችላለሁ ብዬ አስባለሁ.					
304.	በአስፈላጊ ፈተናዎች ላይ ትኩረቴን አጣለሁ, እና ከፈተና በፊት የማውቀውን ቁሳቁስ ማስታወስ አልችልም.					
305.	. በመጨረሻ ፈተናው ካለቀ በኋላ ለፈተና ጥያቄዎች መልሱን አስታውሳለሁ					
306.	ከዋና ፈተናዎች በፊት በጣም እጨነቃለሁ ስለዚህም በፈተና ላይ የምችለውን ለማድረግ በጣም ደክሞኛል.					
307.	አስፈላጊ ፈተናዎችን ስወስድ እኔ ራሴ የተለየ ስሜት ይሰማኛል ወይም አይደለሁም።					
308.	ጠቃሚ ፈተናዎችን ስወስድ አእምሮዬ አንዳንድ ጊዜ ሲንከራተት አግኝቻለሁ።					
309.	ከፈተና በኋላ, ጥሩ አድርጌያለሁ ወይ ብዬ እጨነቃለሁ.					
310.	ከጽሑፍ ስራዎች ጋር እታገላለሁ, ወይም እስከምችለው ድረስ አስወግዳቸው. የማደርገው ማንኛውም ነገር በቂ እንደማይሆን ይሰማኛል።					

ክፍል IV: የስነ-ልቦናዊ ችግርን ለመለየት መጠይቅ (Kessler - 10)

የሚቀጥሉ ጥያቄዎች ባለፉት 30 ቀናት ምን እንደተሰማዎት ያወራሉ።በተሻለ ሁኔታ የሚወክሉትን እያንዳንዱን ጥያቄ ከታች ባለው ሳጥን ውስጥ ምልክት ያድርጉ።

ተ.ቁ	ጥያቄዎች	ሁሉም ጊዜ(5)	አብዛኛውን ጊዜ(4)	አንዳ አንድ ጊዜ(3)	ጥቂት ጊዜ(2)	በጭራሽ(1)
401	ባለፉት 30 ቀናት ውስጥ ያለ በቂ ምክንያት በምንያህል ድግግሞሽ ነው የድካም ስሜት የተሰማህ/ሽ?					
402	ባለፉት 30 ቀናት, በምንያህል ድግግሞሽ የፍርሃት ስሜት ይሰማህ/ሽ ነበር?					
403	ባለፉት 30 ቀናት, በምንያህል ድግግሞሽ ነው የፍርሃት ስሜት ተሰምቶህ/ሽ ምንም ነገር ሊያረጋጋህ/ሽ ያልቻልው?					
404	ባለፉት 30 ቀናት ለምን ያህል ጊዜ የተስፋ ቢስነት ስሜት ተሰምቶህ/ሽ ነበር?					
405	ባለፉት 30 ቀናት ውስጥ ለምን ያህል ጊዜ እረፍት የማጣት ወይም የመቁነጥነጥ ስሜት ተሰምቶህ/ሽ ነበር?					
406	ባለፉት 30 ቀናት ውስጥ ለምን ያህል ጊዜ ኣለመረጋጋት ወይም የመቁነጥነጥ ስሜት ተሰምቶህ/ሽ ኣርፈህ መቀመጥ ያቃተህ/ሽ?					
407	ባለፉት 30 ቀናት ውስጥ ለምን ያህል ጊዜ የድብርት ወይም መከፋት ስሜት ይሰማህ/ሽ ነበር?					
408	ባለፉት 30 ቀናት ውስጥ ለምን ያህል ጊዜ ሁሉም ነገር ጥረት ሁኖ ይሰማህ/ሽ ነበር?					
409	ባለፉት 30 ቀናት ውስጥ ለምን ያህል ጊዜ ነው የድብርት ወይም መከፋት ስሜት በተሰማህ/ሽ ግዜ ምንም ነገር ሊስደስትህ/ሽ ያልቻለው?					

410	ባለፉት 30 ቀናት ውስጥ ለምን ያህል ጊዜ ነው የዋጋ ቢስነት ስሜት ይሰማህ/ሽ ነበር?					

ክፍል V: የእፅ አጠቃቀም መለያ ጥያቄዎች

ተ.ቁ	ጥያቄዎች	አዎ	የለም
501	በህይዎትህ /ሽ ጫት ተጠቅመህ ታዉቃለህ/ሽ?		
502	ባለፉት3 ወራት ዉስጥ ጫት ተጠቅመህ/ሽ ታዉቃለህ/ሽ?		
503	በህይወትህ/ሽ የአልኮል መጠጦችን ተጠቅመህ/ሽ ታዉቃለህ/ሽ?		
504	ባለፉት 3 ወራት ዉስጥ ማንኛዉንም አይነት አልኮል ተጠቅመሃል/ሻል?		
505	ሲጋራ ተጠቅመህ/ሽ ታዉቃለህ/ሽ?		
506	ባለፉት 3 ወራት ዉስጥ ሲጋራ ተጠቅመህ/ሽ ታዉቃለህ/ሽ?		
507	በህይዎትህ /ሽ ሌላ እፅ ተጠቅመህ ታዉቃለህ/ሽ? ይጥቀሡ _____		
508	ባለፉት ሶስት ወራት ሌላ እፅ ተጠቅመህ ታዉቃለህ/ሽ? ይጥቀሡ _____		

ክፍል VI: የማህበረሰብ ድጋፍን ለመለየት የሚያገለግሉ ጥያቄዎች

601.	ከባድ የግል ችግር ቢያጋጥምዎ በእነሱ ላይ የሚተማመኑባቸዉ ለእርስዎ በጣም ቅርብ የሆኑ ስንት ሰዎች ካጠገብዎት ሊሆኑ ይችላሉ(አንዱንይምረጡ)?	1. ምንም 2. 1 ወይም 2 3. 3-5 4. ከ 5 በላይ
602.	እርስዎ በሚያደርጉት ነገር ውስጥ ሰዎች ምን ያህል ትኩረት ያሳያሉ (አንዱን ይምረጡ)?	1. ምንም 2. በጣም ጥቂት 3. አይታወቅም 4. የተወሰኑ 5. በጣም ብዙ

603.	በፈለጉ ጊዜ ከጊደኛዎ ወይም ከጎረቤትዎ እርዳታ ለማግኘት ለርስዎ ምን ያህል ቀላል ነዉ (አንዱን ይምረጡ)?	5.በጣም ቀላል ነዉ 4. ቀላል ነዉ 3. ማግኘት ይቻላል 2. አስቸጋሪ ነዉ 1.በጣም አስቸጋሪ ነዉ

ክፍል VII: የስነ-ልቦና እና ክሊኒካዊ ሁኔታዎች ግምገማ

ተ.ቁ	ጥያቄዎች	ሊሆኑ የሚችሉ ምላሾች
701.	በሃይማኖታዊ ድርጊቶች (በአምልኮ ወይም በጸሎት) ምን ያህል ጊዜ ትሳተፋለህ?	1. ሁልጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ
702.	ከጓደኛዎ ጋር ያለዎት ግንኙነት	1. በጣም ጥሩ 2. ጥሩ 3. አጥጋቢ አይደለም
703.	ከጓደኞችዎ ጋር ብዙ ጊዜ ይጋጫሉ?	1. አዎ 2. አይ
704.	የገንዘብ ችግር አለብዎት?	1. አዎ 2. አይ
705.	የቤተሰብ የአእምሮ ሕመም ታሪክ አለዎት?	1. አዎ 2. አይ
706.	የሚታወቅ ሥር የሰደደ የሕክምና ሕመም አለህ?	1. አዎ 2. አይ

ክፍል VIII: ስለ ራስን በራስ ማጥፋት ጥያቄዎች

ተ.ቁ	ጥያቄዎች	ሊሆኑ የሚችሉ ምላሾች
801	ራስወን ለማጥፋት አስበው ወይም ሞክረው ያውቃሉ?	(1) በጭራሽ (2) አጭር የማለፊያ ሀሳብ ነበር። (3ሀ) ራሴን ለማጥፋት ቢያንስ አንድ ጊዜ እቅድ ነበረኝ ግን ይህን ለማድረግ አልሞከርኩም (3ለ) ራሴን ለማጥፋት ቢያንስ አንድ ጊዜ እቅድ ነበረኝ እናም በእውነት መሞት እፈልግ ነበር። (4ሀ) ራሴን ለመግደል ሞክሬ ነበር፣ ነገር ግን መሞትን አልፈለግሁም። (4ለ) ራሴን ለመግደል ሞክሬ ነበር፣ እናም በእውነት ለመሞት ተስፋ አድርጌ ነበር።

802	ባለፈው አመት ራስዎን ለማጥፋት ምን ያህል ጊዜ አስበዋል?	(0) በጭራሽ (1) አልፎ አልፎ (1 ጊዜ) (2) አንዳንድ ጊዜ (2 ጊዜ) (3) ብዙ ጊዜ (3-4 ጊዜ) (4) ብዙ ጊዜ (5 ወይም ከዚያ በላይ ጊዜ)
803	እራስህን ልታጠፋ እንደሆነ ወይም ልታደርገው እንደምትችል ለአንድ ሰው ተናግረህ ታውቃለህ?	(1) አይ (2ሀ) አዎ፣ በአንድ ወቅት፣ ግን በእውነት መሞትን አልፈለገም። (2ለ) አዎ፣ በአንድ ወቅት፣ እና በእውነት ይህን ለማድረግ ፈልጎ ነበር። (3ሀ) አዎ፣ ከአንድ ጊዜ በላይ፣ ግን ማድረግ አልፈለገም። (3ለ) አዎ፣ ከአንድ ጊዜ በላይ፣ እና በእውነት ይህን ለማድረግ ፈልጎ ነበር።
704	አንድ ቀን ራስን ማጥፋት የመሞከር እድሉ ምን ያህል ነው?	(0) በጭራሽ (1) ምንም ዕድል የለም (2) ይልቁንም የማይመስል ነገር (3) የማይመስል ነገር (4) ሊሆን ይችላል (5) ሳይሆን አይቀርም (6) በጣም አይቀርም