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Common mental disorders and associated factors among high school students in Debre Markos Town, Northwest Ethiopia: an institutional-based cross-sectional study

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ABSTRACT

Background Common mental disorders include anxiety, depression and somatic symptoms. These pose significant public health problems because of their serious effects on personal well-being, social and occupational functions. They also can affect the health and quality of life of people in adolescence, because this age group has been vulnerable to different factors. According to the American Psychiatry Association, more than 60% of adolescents fulfil the criteria for at least one common mental disorder. Despite the high burden of the disorders, there are limited studies in Ethiopia; therefore, this study provided the prevalence of common mental disorders among students in Ethiopia.

Methods From 5 May to 30 May 2021, an institutional-based cross-sectional study was undertaken. Simple random sampling was used to select study participants from each class level across all high schools. A self-administered survey was used that included Self-Reporting Questionnaire 20, Oslo Social Support Scale-3 and other semistructured instruments for the screening of common mental disorders. Data were checked, coded and entered into Epi-Data V.4.6.0, then exported to SPSS V.20 for analysis. Bivariable and multivariable logistic regression analyses were done to identify factors associated with common mental disorders. Adjusted ORs with 95% CIs were calculated and variables with a p value of <0.05 were considered as significantly associated with common mental disorders.

Results A total of 600 high school students were recruited with a response rate of 93.2%. The overall prevalence of common mental disorders among the participants was 181 (32.4%). Being female (adjusted OR (AOR)=1.93; 95% CI: 1.27 to 2.99), a family history of mental illness (AOR=2.23; 95% CI: 1.15 to 4.35), poor social support (AOR=3.14; 95% CI: 1.51 to 6.54), a history of non-physical sexual abuse (AOR=2.09; 95% CI: 1.21 to 3.62) and a history of physical sexual abuse (AOR=2.43; 95% CI: 1.29 to 4.59) were significantly associated with common mental disorders.

Conclusion and recommendation The prevalence of common mental disorders was 32.4% among students; therefore, it is recommended facilitating institutional-based intervention services in the school to decrease the contributing factors for the common mental disorders.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ The limitation of this paper is we were unable to indicate the cause-and-effect relationship since the cross-sectional study design approach was used and it has recall bias.

⇒ The other limitation of this study is it is also prone to social desirability bias due to the data being collected by self-administrative technique and the use of subjective binary rating (yes/no) responses to the Self-Reported Questionnaire (SRQ).

⇒ The SRQ-20 was used, which had good internal consistency, that can deliver as a reference for substantial studies in the future.

INTRODUCTION

Common mental disorder (CMD) is a general term covering a variety of physical, mental and social disturbances that describe disorders like depression, anxiety and somatic manifestations.[1] It is characterised by symptoms such as insomnia, fatigue, irritability, forgetfulness, difficulty in concentrating and somatic complaints that can result in long-term effects on human life.[2] In other words, CMD extends to the scope of experiencing a kind of psychiatric manifestation without diagnosable illness.[3] Currently, CMDs are a public health concern and evidence indicates that the occurrence becomes higher among younger age groups, including students across the globe.[4] The WHO reports that one in seven people worldwide develops mental health problems, and 10.7% of those people have lived with such conditions.[5]

The initial onset of CMDs can be in adolescence, and usually severe mental disorders are typically preceded by less severe events as a prodromal phase, and giving early intervention helps to prevent the persistence of illness.[6] Half of individuals with mental

health disorders first experience the corresponding symptoms at the approximate age of 14 years.[7] Individuals with CMD may experience different levels of depression, anxiety and somatic symptoms. These symptoms significantly interfere with their relationships with other people, their work and performing their day-to-day activities with impairment in social interaction, such as the inability to have smooth relations with other persons, family and colleagues.[8]

Adolescence is defined by the WHO as the period between 10 and 19 years of age.[9] This period is the most stressful because of a variety of factors, such as academic load, overthinking about future life and the limitless wants, which are risk factors for CMDs. According to a study conducted on adults, the majority of prevalent mental problems appear to start before the age of 25 years, and frequently between the ages of 11 and 18 years.[10] Even though the symptoms of depression are more prevalent during adulthood, these also occur in children and adolescents under 15 years of age. Regarding anxiety, the rates are similar in all age groups, perhaps lower in older adults.[11]

A meta-analysis shows that the burden of CMD is more prevalent among girls and negative consequences are not often correctly identified among adolescents.[12]

A cross-sectional study from Brazil found that the prevalence of CMD among girls was 23.3% and in boys 11.1%, indicating the highest burden observed in girls.[11] Cross-sectional studies report that among high school students, females had higher levels of CMD than males regardless of their age.[11 13] In Ethiopia, cross-sectional studies including high school students showed that alcohol use was associated with CMD.[7 14] Cross-sectional studies in India and China among high school students showed poor social support, and students who had a history of sexual abuse were significantly associated with CMDs.[15 16] Cross-sectional studies conducted in developing countries including Ethiopia indicated the absence of social support, and a history of sexual abuse was significantly associated with CMD.[7 17 18] Cross-sectional studies among students in Ethiopia revealed a strong relationship between the occurrence of mental illness and the presence of a family history of mental illness.[14 19 20]

Early-onset CMDs have a great impact that leads to the early termination of education and thereby long-term adverse social and economic consequences on outcomes such as employment and financial security.[21] Promoting psychological well-being and seeking early mental health intervention by identifying the causative factors help to minimise the development of CMDs. Therefore, the studies conducted on adolescents potentially serve to inform, develop and integrate evidence-based and age-appropriate mental health promotion and mental health prevention programmes.[7 21 22]

CMD has a number of negative impacts on students, such as the inability to complete education and perform well academically, and being at risk of substance use.

Despite the existing problem, the extent and impact particularly on adolescents are not well studied in Ethiopia. Therefore, this study aimed to determine the prevalence of CMD and identify the risk factors among high school students in Debre Markos Town, Northwest Ethiopia.

OBJECTIVE
Overall objectives
This study set out to assess the prevalence of CMDs and their associated factors among high school students in Debre Markos Town, Northwest Ethiopia, 2021.

Specific objectives
► To determine the prevalence of CMDs among high school students in Debre Markos Town, Northwest Ethiopia, 2021.
► To identify factors associated with CMDs among high school students in Debre Markos Town, Northwest Ethiopia, 2021.

METHODS AND MATERIALS
Study design and period
An institutional-based cross-sectional study design was conducted from 5 May to 30 May of 2021.

Study area
The study was conducted at five high schools in Debre Markos Town, Northwest Ethiopia. Debre Markos is the capital city of East Gojam administrative zone which is located in the northwest of the capital city of the Federal Democratic Republic of Ethiopia—Addis Ababa—at a distance of 300 km and 265 km to the capital of Amhara Nation Regional State, Bahir Dar.

The town has a total population of 113 101. There are seven kebeles and it is one of the oldest towns with one referral hospital. The town has five public high schools and there is no private high school. A total of 8871 students were registered for grades 9 up to 12 in the academic year of 2021.[23]

Source population
All high school students who were enrolled in Debre Markos Town.

Study population
High school students in Debre Markos Town were identified during the data collection time.

Inclusion criteria
High school students from grades 9 up to 12 who attended class and provided informed consent at the time of data collection were included.

Exclusion criteria
Students who were seriously ill at the time of data collection were excluded.

Table 1 The sample size determination by using two population proportion formulas from significantly associated factors of common mental disorders from previous research

Variables	Prevalence of unexposed group	Power	OR	Sample size
Being female	27.93%	80%	2	314
Alcohol use	26.9%	80%	2	320
Sexual abuse	27.4%	80%	2	318

Sample size determination

The sample was calculated by using both the single population proportion formula and two population proportion formulas by using Epi Info V.7. The larger sample was taken by considering the following assumptions: prevalence (p)=34.9% taken from the previous similar study which was done in Mekelle among high school students,[7] 95% CI, a margin of error (d)=4% from the previous Mekelle study and a non-response rate of 10%.

The calculated sample size was 545 and non-response increased by 10% of the sample size, which was 54.5≈55 then 545+55=600. Therefore, the sample size done in associated factors was lower than the outcome variable sample size (600). The sample size determination by using factors that were significantly associated in previous studies with similar setting was less than 600[7] (table 1).

Sampling technique and procedure

The sample was taken from all high schools by considering the class level (grade) as strata in Debre Markos Town (five public high schools). Simple random sampling was used, which means study subjects were proportionally allocated to each stratum or class level. The final sample was drawn from each class level by using simple random sampling, particularly by computer-generated techniques. The selected students from all class levels in a school were taken to one hall then the hard copy questionnaires were administered after orientation and students filled out the informed consent. Hard copy questionnaires were administered for the study participants to be completed by themselves anonymously. The average time that was needed to complete the questionnaires was 30 min (figure 1).

Operational definitions

CMDs: the Self-Reporting Questionnaire (SRQ-20) with 20 items was used to screen for CMDs which include depression, anxiety and somatic symptoms. The cut-off point of this screening tool was greater than or equal to 8, which means students who scored 8 or more out of 20 items in the last 4 weeks were considered to have a CMD.[24] The SRQ is a screening instrument, not a diagnostic instrument.

Current substance use: using at least one of any specific substances for non-medical purposes within the last 3 months (alcohol, khat and cigarette).
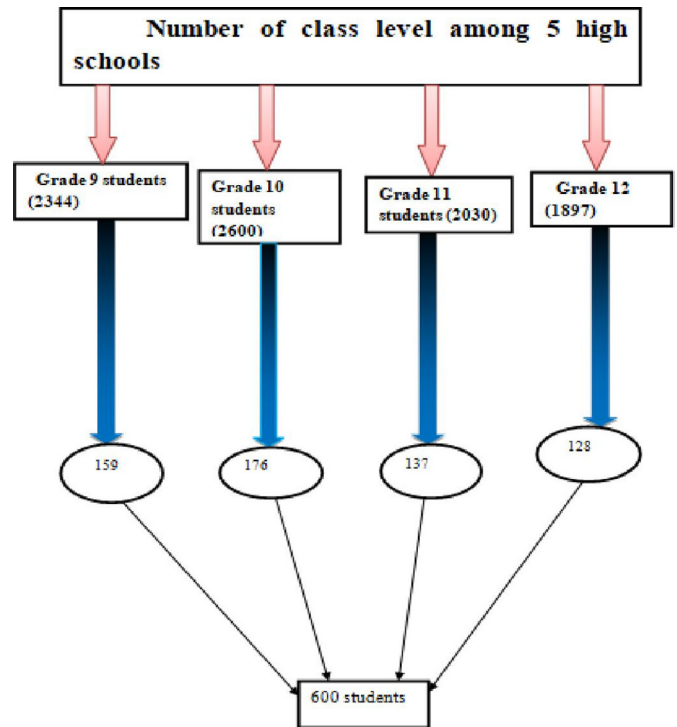

Figure 1 Diagram representing sampling technique for the high schools in Debre Markos Town, Northwest Ethiopia, 2021.

Ever (lifetime) use of a substance: using at least one of any specific substances for a non-medical purpose at least once in a lifetime (alcohol, khat and cigarette).

Social support: support at a time when difficulties and critical conditions like financial, social and psychological problems occur; screened by the Oslo Social Support Scale which has a total of 14 questions and is classified into three broad categories: poor support: 3–8, moderate support: 9–11 and strong support: 12–14.[25]

Physical exercises: when participants engaged in activities such as running, fast walking, biking, dancing and football playing that increase their heart rate and make them out of breath some of the time for at least 30 min per day for at least 5 days per week.[26]

Known chronic medical illness: the presence of chronic medical illness as a condition that requires ongoing medical attention or limits activities of daily living or both. For example, HIV/AIDS, diabetes, epilepsy, and others were assessed by using simple yes or no questions.

Physical sexual abuse: the sexual exposure of children against their will that includes genital touching, fondling or sexual interaction.

Non-physical sexual abuse: the exposure of children to verbal and behavioural sexual situations that do not involve touching or physical contact like showing pornography.

Data collection procedure and tool

Data were collected through a self-administered survey with five parts. The first part of the survey was about

sociodemographic information that included the general sociodemographic information of participants.

The second part was a self-reported questionnaire having 20 yes or no questions with a cut-off point of 8 with Cronbach's alpha of 0.84, which is the most commonly used cut-off point in developing countries including Ethiopia.[24]

The third part was about behavioural factors, which comprise current and ever use of substances assessed by simple yes or no questions. The history of physical exercise was assessed by one question for each adapted from the Global School-based Health Survey (GSHS) questionnaire developed by the WHO and the Centers for Disease Control and Prevention.[26]

The fourth part was asking about psychological factors, which includes sexual abuse assessed by four questions regarding lifetime exposure to sexual abuse adapted from ISPCAN Child Abuse Screening Tool,[27] and social support was measured by the Oslo Social Support Scale-3 with scores ranging from 3 to 14.[25]

The fifth part was about clinical factors that include a family history of mental illness assessed by asking the extent of agreement with the following question: Do you have a parent, child, brother, sister or another relative (living or dead) who has or had a chronic serious mental illness that makes them think of suicide? The possible answer was yes or no.[28] The use of substances is screened by yes/no questions for the study participants and family use of substances is also screened independently. As family interaction in Ethiopia is close, it was expected that participants in the study would be familiar with the health status of the immediate family members as they live in the same house. The other portion of the clinical factor was known chronic medical illness which was screened as present or absent by using simple yes or no questions.

Data quality control
The questionnaire was initially written in English, translated into the participant's native Amharic language, and then back-translated to English by a third party. A pretest was conducted on 30 (5%) of the total sample size in Finote Selam high school students 1 week before data collection to check the validity and reliability of the instrument with Cronbach's alpha of 0.77 for the outcome variable. The data were collected by three Bachelor of Science psychiatry professionals and supervised by two Bachelor of Science psychiatry professionals after 2-day training on the administration of the study instruments. Throughout the data collection, data collectors were supervised and meetings were held between the data collectors, supervisors and the principal investigator, in which problematic issues raised during the data collection were discussed. The collected data were reviewed and checked for completeness before data entry; the incomplete data were discarded. The data entry format template was prepared for data entered into Epi-Data V.4.2.0.

Data processing and analysis
Data were checked, coded, and entered into Epi-Data V.4.2.0 and exported to SPSS V.20 for analysis. The sociodemographic characteristics and other factors of participants were analysed by descriptive statistics (percentage, mean and SDs). Bivariable logistic regression analysis was performed to find the association of each independent variable with the outcome variables. All variables with a p value of less than 0.20 at bivariable logistic regression analysis were entered into the multivariable logistic regression model. P values of <0.05 were considered statistically significant and the adjusted ORs (AORs) with a 95% CI were calculated. Results were presented in the form of tables, figures and charts using frequency and summary statistics such as mean and percentage to describe the study participants concerning relative variables, and discussed with previous results. The fitness of the model was determined by Hosmer and Lemeshow test which provides a 69.7% in this study.

Patient and public involvement
In this study, the participants were students who were educated at high school in Debre Markos Town, Ethiopia. The participants have not participated in the study design and recruitment process. The result was disseminated to the Debre Markos health bureau and to the zone educational bureau to give immediate intervention to this problem for better education quality.

RESULTS
Sociodemographic characteristics of the participants
From a total of 600 study participants, 559 high school students were included in the analysis, with a response rate of 93.2%. Among the participants, 316 (56.5%) were female and 243 (43.5%) were male. The mean age of participants was 17.74 years with an SD of ±1.43 and with a range of 15–21 years. The age of the participants is over 18 years for greater than 50% of study participants because education in Ethiopia started late so most students travelled by foot and children at an early age were unable to go to school as schools are far from their residences. The largest proportion of participants was of Amhara ethnicity (552, 98.7%) and 546 (97.7%) were Orthodox religion followers. Of the participants, 112 (20%) had excellent scores and 181 (32.4%) had very good results according to the Ethiopian national standard grading system. Among the study participants, 427 (76.4%) were living with both parents and 167 (29.9%) were grade 10 students. Among the participants, 344 (61.5%) were from urban areas and 215 (38.5%) were from rural areas (table 2).

Behavioural characteristics of participants
Among the 559 study participants, 159 (27.4%) were alcohol users in their lifetime and 149 (26.7%) were alcohol users in the past 3 months. Sixty (10.7%) participants were khat users in their lifetime and 54 (9.7%) were khat users in the past 3 months. Forty-seven (8.4%)

Table 2 Sociodemographic characteristics of the study participants in Debre Markos Town, Northwest Ethiopia, 2021

Variables	Category	Frequency	Percentage
Age	≤15	31	5.5
	16–17	216	38.6
	18–19	241	43.1
	≥20	71	12.7
Sex	Male	243	43.5
	Female	316	56.5
Religion	Orthodox	546	97.7
	Other*	15	2.3
Place of origin	Urban	344	61.5
	Rural	215	38.5
Ethnicity	Amhara	552	98.7
	Other†	7	1.3
Living arrangement	Living with both parents	427	76.4
	Living with single parent	76	13.6
	Living with other relatives or alone	56	10.0
Class level	Grade 9	146	26.1
	Grade 10	167	29.9
	Grade 11	127	22.7
	Grade 12	119	21.3
Academic performance	50–74.9	266	47.6
	75–84.9	181	32.4
	≥85	112	20.0
Pocket money per month	≤250	438	78.4
	251–500	78	14.0
	501–750	10	1.8
	751–1000	18	3.2
	>1000	15	2.7
Father's educational status	Unable to read and write	96	17.2
	Able to read and write	204	36.5
	Grade 1–8	68	12.2
	Grade 9–12	66	11.8
	Diploma	20	3.6
	Degree and above	105	18.8
Mother's educational status	Unable to read and write	175	31.3
	Able to read and write	169	30.2
	Grade 1–8	53	9.5
	Grade 9–12	66	11.8
	Diploma	44	7.9
	Degree and above	52	9.3

*Muslim, Protestant and Catholic.
†Oromo, Tigira and Gurage.

Table 3 Psychological and clinical factors among high school students in Debre Markos Town, Northwest Ethiopia, 2021

Variables	Category	Frequency	Prevalence
Social support	Strong	71	12.3
	Moderate	216	38.6
	Poor	272	48.7
Non-physical sexual abuse history	Yes	104	18.6
	No	455	81.4
Physical sexual abuse history	Yes	68	12.3
	No	491	87.8
Known family history of mental illness	Yes	54	9.7
	No	505	90.3
Known chronic medical illness	Yes	27	4.8
	No	532	95.2

were cigarette users in their lifetime and 45 (8.1%) were cigarette smokers in the past 3 months. The reason that current users are not much lower than ever users of alcohol and khat is because students, once they start using substances, have difficulty quitting those substances. As a result, users develop harmful consequences and are not motivated to stop. Out of the study participants, 94 (16.8%) were doing physical exercise.

Psychosocial and clinical factors
Seventy-one (12.7%) of the participants had strong social support, 216 (38.6%) had moderate social support and 272 (48.7%) had poor social support.

Of the study participants, 104 (18.6%) had experienced non-physical sexual abuse and 69 (12.3%) had experienced physical sexual abuse. Among the participants, 54 (9.7%) had a family history of mental illness and 27 (4.8%) had known chronic medical illness (table 3).

Prevalence of CMDs
The overall prevalence of CMDs among study participants was 181 (32.4%; 95% CI: 28.49% to 36.27%) (figure 2). Of these CMDs, 38.6% and 24.3% were among female and male participants. CMDs were screened by SRQ with a cut-off point of 8 and more out of 20 items. The presence of specific disorders such as depression, anxiety and somatic symptoms is not identified by the SRQ.

Associated factors of CMDs
From bivariable logistic regression analysis, the results showed that being female, living arrangements, class level, family history of mental illness, known chronic medical illness, poor social support, physical and non-physical sexual abuse, and academic performance were associated with CMDs with a p value of <0.20 to be considered for multivariable and bivariable logistic regression analyses.

In multivariable and bivariable logistic regression analyses, by keeping the confounding variables constant, the factors being female, poor social support, family history
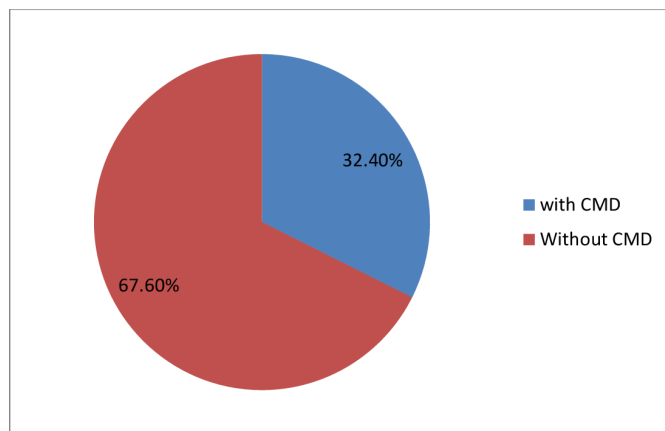
Figure 2 The prevalence of common mental disorders (CMDs) among study participants in Debre Markos Town, Northwest Ethiopia, 2021.

of mental illness, and physical and non-physical sexual abuse were significantly associated with CMDs (p<0.05).

In the case of sex, the odds of developing CMDs among females were 1.95 times more likely, as compared with male students (AOR=1.95; 95% CI: 1.27 to 2.99).

Students who have a family history of mental illness were 2.23 times more likely to develop CMDs as compared with those who have no family history of mental illness (AOR=2.23; 95% CI: 1.15 to 4.35).

The likelihood of developing CMDs was 3.14 times higher among students who had poor social support than students with strong social support (AOR=3.14; 95% CI: 1.51 to 6.54).

The odds of developing CMDs were 2.09 times more likely among those who report a history of non-physical sexual abuse than those not reporting a history of non-physical sexual abuse (AOR=2.09; 95% CI: 1.21 to 3.62), and 2.43 times more likely among those who report a history of physical sexual abuse than those not reporting a history of physical sexual abuse (AOR=2.43; 95% CI: 1.29 to 4.59) (table 4).

DISCUSSION

Generally, the prevalence of CMDs among students was 181 (32.40%; 95% CI: 28.49% to 36.27%). Even though this study did not reveal the temporal relationship of CMD with independent variables, it used standard tools to measure the

Table 4 Factors associated with common mental disorders (CMDs) in bivariable and multivariable regression analyses among high school students in Debre Markos Town, Northwest Ethiopia, 2021

Variables	Categories	CMD		COR with 95% CI	AOR with 95% CI	P value
		Yes	No			
Sex	Female	122	194	1.96 (1.35 to 2.84)	1.95 (1.27 to 2.99)	0.002**
	Male	59	184	1	1	
Class level	Grade 9	39	107	1	1	
	Grade 10	53	114	1.28 (0.78 to 2.08)	1.03 (0.60 to 1.77)	0.910
	Grade 11	38	89	1.17 (0.69 to 1.99)	0.99 (0.55 to 1.79)	0.988
	Grade 12	51	68	2.06 (1.23 to 3.45)	1.63 (0.92 to 2.89)	0.092
Family history of mental illness	Yes	31	23	3.19 (1.80 to 5.65)	2.23 (1.15 to 4.35)	0.017*
	No	150	355	1	1	
Chronic medical illness	Yes	18	9	4.58 (2.02 to 10.42)	1.68 (1.06 to 2.64)	0.260
	No	161	369	1	1	
Living arrangement	Both parents	126	301	1	1	
	Single parent	32	44	1.74 (1.05 to 29)	1.72 (0.98 to 3.01)	0.056
	Other relatives	23	33	1.67 (0.94 to 2.95)	1.53 (0.80 to 2.94)	0.193
Social support	Poor	110	162	3.34 (0.38 to 0.81)	3.14 (1.51 to 6.54)	0.002**
	Moderate	59	157	1.85 (0.93 to 3.68)	1.72 (0.80 to 3.66)	0.158
	Strong	12	59	1	1	
Academic performance	Sufficient	90	176	1.46 (0.89 to 2.39)	1.31 (0.75 to 2.29)	0.338
	Good	62	119	1.49 (0.88 to 2.51)	1.60 (0.89 to 2.87)	0.111
	Very good	29	83	1	1	
Non-physical sexual abuse	Yes	56	48	3.08 (1.99 to 4.77)	2.09 (1.21 to 3.62)	0.008**
	No	125	330	1	1	
Physical sexual abuse	Yes	42	27	3.93 (2.33 to 6.62)	2.43 (1.29 to 4.59)	0.006**
	No	139	351	1	1	

*P<0.05; **p<0.01.
AOR, adjusted OR; COR, crude OR.

outcome variable as a strength. This finding is in line with the studies conducted in similar settings in Ethiopia among high school students in Jimma (30.8%)[29] and Mekelle (34.9%).[7] The possible reason that this finding was in line with the previous Ethiopian studies might be due to the similarities of psychosocial factors like social support and sexual abuse. The particularly high number of females than males was a factor significantly associated with CMD in the current and previous studies.

This finding was lower as compared with the former studies that were done in Saudi Arabia (54%),[30] Malaysia (47%)[31] and Indonesia (64.7%).[32] Numerous factors could account for this variation, as shown by the sociodemographic data; for example, the proportion of female students was significantly higher than that of male students.[32] The other sociodemographic characteristic as a determinant factor in the Malaysian study was poor academic performance, which was not associated with the current study.[31] The tool that was used to measure CMDs is different from the current study. For instance, the tool used in Malaysia was the General Health Questionnaire, which was different from the SRQ-20 that was used in our study.[31] The variation might be the different way of education delivered to the students and the approach of teachers in our context was more socialised than in those countries, which creates a different level of stress that might expose students to CMDs. Differences in the education system may cause different levels of stress for the students; even this variation might also depend on the instructors and the school's way of delivering the course.

In another way, this finding was higher as compared with former studies that were conducted in India (20%),[33] South Africa (15.8%)[17] and Egypt (23.3%).[18] The discrepancy might be due to various reasons like sociodemographic differences as shown in the study conducted in Indian students from urban residences, which were significantly associated. It was a protective factor in the current study and there was an equal number of females and males, but females dominate in the current study.[33] The inclusion of a family history of mental illness in our study, which was not present in the South African study, may be another factor contributing to this study's higher ranking. The other possible reason for this discrepancy might be the effect of factors including psychological factors, especially the presence of a history of sexual abuse, which was not a determinant factor in the Egyptian study but the factor that raised the prevalence of CMD in our finding.[18] Even though there were similar study designs used, the different tools used to assess those studies could elevate the prevalence of CMDs. For example, the study conducted in India used the Kessler Psychological Distress Scale, which was different from the current study.[33] The other possible discrepancy might be the sources of data as studies conducted in South Africa and Egypt used secondary data from the GSHS.[17 18] This variation might be due to the terminological differences that studies used including the difference from the definition of CMDs and the corresponding psychological distress, and the discrepancy brought by the different assessment tools that

are used to measure those problems could be the postulated reason.[33]

Regarding factors significantly associated with CMDs, one of the factors that statistically significantly associated with CMDs was being female than being male. This result is consistent with other research conducted in Mekelle,[7] Morocco[18] and South Africa.[17] This association might be due to a low-stress tolerance and a high burden of household work in females found as compared with males.[7 18] The other reason could be that during puberty, physical changes, including menstruation, begin and other hormonal changes may increase risk of CMD.[7] They also internalise stress or their active nature of the response to the stressor and the effect of domestic violence that make the girls depressed and anxious.[18] A meta-analysis study indicated that the possible evidence that this difference happened was the presence of more exposure to sexual abuse in females.[12]

Another associated factor with CMDs was poor social support, which was supported by other studies conducted in Morocco,[18] California[34] and Ethiopia.[35] The possible reason could be the feeling of loneliness or having no close friends who easily understand and share the day-to-day life stress that might result in the occurrence of CMDs.[18] The other possible reason for the occurrence of CMDs among those who had poor social support was the protective effects of strong social support that can reduce the risk of developing CMDs.[34] Studies showed that social support had different mechanisms, either as a beneficial effect from CMDs regardless of the occurrence of stress or as a tool to improve or alleviate the existing CMD. Another justification might be also the effect of changing physiological homeostatic of the hypothalamic pituitary adrenocortical system that may decrease the genetic and other environmental exposures.[35] The presence of poor social support being the cause of CMD was also explained by other psychological factors and exposure to sexual abuse that decreases interactions. Finally, factors might be the realcauses of common mental disorders even though it is not possible to identify the temporal relationship between them since we approach a cross-sectional study design.

The history of both physical sexual abuse and nonphysical sexual abuse was also significantly associated with CMDs. This finding was in line with other research undertaken in Mekelle,[7] India[33] and Jimma.[36] The history of nonphysical sexual abuse was explained by the harassment that someone misbehaves that creates a sense of anxiety but it is not disclosed to other people due to perceived sociocultural impacts.[33] The numbers of physical sexual abuse are relatively less than non-physical sexual abuse because abusers fear the law since it is a serious and sensitive issue.[36] This finding might be because childhood exposure to sexual abuse has a long-term psychological impact that can lead to CMDs in the future life of an individual.[7]

The presence of a family history of mental illness was reported to be associated with CMDs as evidenced by other studies carried out in Kombolcha[14] and University of Gondar,[35] as well as what is found in this study. The possible reason might be the effect of genetic predisposition and

the brain structure abnormality in the family members.[35] The other reason could be the effect of stress due to caring for the mentally ill individual or family members and living conditions that can result in CMDs.[14 35] The presence of a family history of mental illness might also decrease the inter-action of the caregiver with other people because of the effect of stigma and being busy caring for and supporting the family members that further increase the risk of having CMD since poor social support is also a determinant factor that could be the postulated reason.[14]

However, in this study, the level of class was not associated with CMD. The probable reason might be the effect of similar stress among class levels with their age.[20] Even though stress becomes high as class level increases, the coping ability of students also develops through experience. The other reason could be the good emotional feeling of joining a university, which reduces the tendency of developing CMDs.

CONCLUSIONS

The prevalence of CMDs among high school students was 32.4%. Being female, having poor social support, a family history of mental illness, and being subjected to physical and non-physical sexual abuse were significantly associated with having a CMD. Therefore, this study indicates that students need access to intervention services and develop strategic activities that will decrease the prevalence of CMDs and their contributing factors. There is always the need for the promotion of CMDs for screening, identification and early treatment as a pillar to ameliorate this problem.

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