PREVALENCE OF PSYCHOLOGICAL IMPAIRMENT AND ASSOCIATED FACTORS AMONG ADOLESCENTS ATTENDING YABERUS HIGH SCHOOL IN WOLKITE TOWN,GURAGE ZONE,SNNPR,ETHIOPIA 2022

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A RESEARCH SUBMITTED TO COLLEGE OF MEDICINE AND HEALTH SCIENCE, DEPARTMENT OF NURSING FOR THE PARTIAL FULLFILMENT FOR BACHELOR DEGREE IN NURSING.

June, 2022 E.C.

Wolkite, Ethiopia

WOLKITE UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCE

DEPARTMENT OF NURSING

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Abstract

Background: *Adolescence is a critical period for promoting psychological well-being and early mental health intervention in order to prevent the onset of mental health problems. Adolescents' psychological impairment has been connected to high-risk behaviors like drinking, smoking, using drugs, and engaging in unsafe sexual activities. Psychological impairment has an impact on teenage academic achievement as well as overall health, which has a significant impact on adult life chances.*

Objective: *To assess prevalence and associated factors of psychological impairment among adolescents attending Yaberuse High School In Wolkite Town ,Gurage Zone,SNNPR,Ethiopia 2022.*

Methods: *Institution based cross-sectional study was done among 768 students from April 25 to June 15, 2022. Stratified multistage sampling procedure was used to select study subjects. Data were collected using a pretested and structured self-administered questionnaire. Psychological impairment was assessed by using youth self-report version of Pediatric Symptom Checklist(Y-PSC). Binary logistic regression models were fitted to identify associated factors. All variables with a probability value of ≤0.20 at bivariate logistic regression analysis were entered into the multivariate logistic regression model to control the possible effect of confounders. A probability value of less than 0.05 was considered statistically significant. Adjusted odds ratio with its 95% confidence interval was used to declare the statistical significance between psychological impairment and associated factors.*

Result: *A total of 768 students participated in the study with a response rate of 92% (n = 706). Of the total respondents, 398 (56.4%) were females. The overall prevalence of psychological impairment among the study participants was 31.4%. substance use [AOR=3.95; 95% CI: (2.357, 6.622)], poor social support [AOR=2.232; 95% CI: (1.145, 4.353)]. and being "having history of suicidal ideations" in the past years as compared with their counterparts [(AOR=4.39, 95% CI=(2.370, 8.159)].were significantly associated with psychological impairment* (P <0.05).

Conclusion: *This study found that the magnitude of psychological impairment among adolescents was high. and substance use, poor social support and suicidal ideation were factors significantly associated with psychological impairment*

Key words*:* *Psychological impairment, Adolescent Students ,Health Risk Behaviours*

Acknowledgments

First of all we would like to thank almighty God for being with us in this all journey. Next, Our gratitude is to Wolkite University, College of medicine and health science and, Department of nursing for giving us this chance to prepare this research.

We would like to extend our sincere appreciation to our advisors Mrs. BETHELHEM SILESHY and MR. BOGALE CHEKOLE for their mentorship, guidance and their dedication throughout the preparation of this research development and providing important literatures related to our topic also for giving constrictive comments. Finally we would like to express our heartfelt gratitude and sincere appreciations to all data Collectors, study participants in this study and Yaberus school; without them, this research wouldn't have been possible.

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List of acronyms and abbreviation

AOD: Adjusted odd ratio

CI: Confidence interval

GHQ : General health question

HSDP: Healthy School Development Project

K-10: Kessler Psychological Distress Scale

OR: Odd ratio

PI : Psychological impairment

PSC: Pediatric Symptom Checklist

WHO: World Health Organization

Y-PSC: Youth Pediatric Symptom Checklist

1. Introduction

1.1. Background

Psychological impairment (PI) is defined as a state of emotional suffering manifested by an undifferentiated combination of depressive and anxious symptoms, which are sometimes accompanied by somatic symptoms [1].

Mental problems usually manifest themselves in childhood or adolescence [2]. “Because adolescence is a phase defined by high risk behaviors, it is a vital period characterized by vulnerability to psychological impairment. [3][4]. Adolescents' PI and other mental disorders have been connected to high-risk behaviors like drinking, smoking, using drugs, parenting style and engaging in risky sexual activities. [3][5][6]. Alcohol usage among adolescents has been linked to psychiatric impairment and suicidal behavior in previous studies. Smoking and substance abuse were also linked to PI in school-aged teenagers, indicating that now is a key time to promote psychological well-being and early mental health intervention in order to prevent the onset of mental health problems” [7].

Students have a much higher level of PI than their community peers [8]. PI among adolescent students is a substantial public health concern in both developed and developing countries [3]. This is linked to poor mental health, which has an impact on their level of functionality [9] and it has a significant impact on scholastic attainment as well as the overall health of adolescents. As a result, chances in adult life are significantly impacted[10].

PI is widespread in teenagers, according to previous surveys, with a prevalence of 35% found in a Canadian study [3]. Furthermore, approximately 54 percent and 40% of peoples in China and Saudi Arabia, respectively, showed signs of mental illness [11]. Adolescents in poor and middle-income nations have been found to have a significant prevalence of psychological impairment. In an Indian cross-sectional study, 10.5 percent of pupils had mild psychological impairment,5.4 percent had moderate psychological impairment, and 4.9 percent had severe PI[12].

In addition, a study conducted in Zambia revealed that 15.7 percent of adolescents have PI[9]. , while another study found that 20.6 percent of Tanzanian pupils had single PI and 10.3 percent had multiple psychological impairment, and in study conducted among undergraduate students of

Adama University; Eastern Ethiopia 21.6 percent students had PI[13]. Another study found that 32.6 percent of medical students in Ethiopia suffered emotional discomfort [8].

Even though mental health issues are addressed in Ethiopia's national health policy, interventions are limited, and a lack of knowledge about the issue is a contributing cause to poor mental health services. As a result, epidemiological data demonstrating the prevalence of psychological impairment among students over time is required[8].

1.2 Statement of the Problem

Psychological impairment is a public health issue that impacts teenagers' everyday activities, such as school and work performance, relationships with family and friends, and community engagement [14].

PI among teenage pupils is a substantial public health concern in both developed and developing nations [3]. This can be linked to poor mental health, which impairs their ability to function, and for many, it has an influence on school attainment as well as the overall health of teenagers, limiting their chances in adulthood[12].

Mental illnesses are one of the primary causes of illness and impairment across the world. According to the world Health Organization (WHO), one out of every four individuals in the world suffers from a mental condition at some time in their lives, with an estimated 450 million people affected Mental illnesses are one of the primary causes of illness and impairment across the world[15]. It is currently responsible for one out of every five years spent living with a handicap throughout the world, as well as Around 20% of the world's teenage population suffers from mental illness [14]. In teenagers, mental health issues account for 16% of the worldwide burden of disease and injury [16].

According to a Canadian research, 35.1 percent of teenage pupils suffer from psychological impairment, which is much greater than any other segment of the general population [3] Furthermore, 7.6% of California students and 40.1 percent of Chinese pupils [12] In Saudi Arabia, 54% of students are female[17]. In Indonesia, 64.7 percent of students are female[18]. In India, 20.8 percent of kids [12] and 41.7 percent of students in Egypt have psychological problems.

While PI in school-aged children has been extensively studied in industrialized nations, there are few studies available in the African sub-region, notably in Ethiopia. Even though mental health issues are addressed in Ethiopia's national health policy, of psychological interventions are limited, and a lack of knowledge about the issue is a contributing cause to inadequate mental health care. As a result, epidemiological data demonstrating the prevalence impairment among students over time is required. As a result, the purpose of this study is to determine the prevalence of PI and the related variables among Adolescents Attending Yaberus High School In Wolkite Town,Gurage Zone,SNNPR,Ethiopia 2022

1.3. Significance of the study

One of the commonest mental health conditions among adolescents is the development of psychological impairment. This is because, at this age, they are generally exposed to strain and stress due to several problems such as meeting the expectations for sexual and social relationships, homework, and examination. These expectations incline them toward psychological impairment. Due to this, the present study is essential in contributing to the knowledge base and would inform interventions needed to reduce psychological impairment among in-school adolescents.

Results from this study will potentially serve to inform developing and integrating evidence based and age-appropriate mental health promotion and disease prevention programs. It may also serve as input for policymakers and planners to indicate appropriate measures to tackle the problem regarding common psychological impairment in secondary school students. In addition, the paper will be useful to other researchers as reference material while conducting further studies on similar problems.

2 Literature Review

2.1 Over view

Psychological impairment is a syndrome characterized by a clinically significant disturbance in cognition, emotion regulation, or behavior, as well as dysfunction in psychological, biological, or developmental processes, and empirical evidence suggests that students have a higher rate of mental disorders than the general population. PI is a non-specific mental health disorder that includes anxiety, depression, and physical symptoms. Vulnerability, sadness, fear, long-term anxiety, restlessness, negative thoughts, and social isolation are all signs of depression. [19].

Psychological impairment is a public health concern that has an impact on teenagers' daily activities, such as school and work performance, family and friend connections, and community involvement. [14]

Mental problems generally manifest themselves in childhood or adolescence. Adolescence is a vital phase marked by vulnerability to psychological impairment, making it an essential time to promote psychological well-being and early mental health intervention in order to prevent the onset of mental health problems." [20]

2.2 Prevalence of psychological impairment

According to a cross-sectional epidemiological survey, the incidence of psychological distress was 20.8 percent among 7740 pupils from 73 schools in the District of Ernakulam in Kerala, India. Cluster random sampling was used to select the schools from the District's 168 high (classes up to year 10) and higher secondary (classes up to year 12) schools [21].

Another cross-sectional study conducted in Saudi Arabia in 2019, 74.5 percent of 258 peoples were affected. At King Saud bin Abdulaziz University for Health Sciences in Jeddah, Saudi Arabia, 258 medical students were chosen using a non-probability convenient sampling technique.[22]

Furthermore , another cross-sectional survey, 54 percent of 276 pupils enrolled in secondary schools in the city of Buraydah in Saudi Arabia's Al-Qassim governor showed PI [11].

The frequency of psychological discomfort was 35.1 percent in a survey of 9,241 children from 47 school boards and 181 schools across Canada[3].

According to a cross-sectional survey conducted as part of the Healthy School Development Project (HSDP) in 2019, approximately 32.9 percent of 4,098 adolescent students in four representative countries: Laos, Mongolia, Nepal, and Sri Lanka reported psychological distress, with 7.9 percent e13.2 percent reporting suicidal ideation[23]. Beside According to a national representative cross-sectional data analysis of 6745 adolescents in 2020, the prevalence of psychological distress among school adolescents in Morocco was 23.3 percent. A two-stage sample design was used, with schools and classes included in the mix [20].

In a cross-sectional, community-based study of 1000 Tanzanian secondary school students, the proportion of students with moderate to severe PI (as measured by the Kessler K-10) was 23.0 percent, and a multistage cluster sampling technique was used to obtain the required number of study participants [17]. In addition the prevalence of psychological discomfort was 57 percent in a community-based cross-sectional survey done among 921 secondary school students in Mbarara Municipality, Uganda, in 2021. The study participants were recruited using a multistage cluster sampling technique[24].

Moreover according to secondary analysis conducted using data collected in 2004 in Zambia during the global school-based health survey, Psychosocial distress was detected in 15.7 percent of the 2257 students who participated in the survey in 2015, and participants were randomly selected using a two-stage cluster sampling technique [9].
According to cross-sectional study Among Secondary School Students in Mekelle City From May 15 to June 15, 2018, which enrolled 782 children . The prevalence of psychological discomfort was 34.9 percent, and study subjects were chosen using a stratified multistage selection procedure[12].

Furthermore, according to Institution based cross-sectional study design conducted in Samara university from December to June 2018 among 8,777 students the prevalence of mental distress among students was found to be 53.2%. A simple random sampling technique was employed to select the study participants [19]. Finally according to cross-sectional community based study conducted in Jimma town, south west of Ethiopia among 1006 individuals 22.7% of the study population had mental distress by using multistage sampling method[25].

2.3 Factors associated with psychological impairment

A cross-Sectional study conducted in District of Ernakulam of the State of Kerala, India, Academic failure, alcohol and cigarette use, suicidality, and sexual abuse are significantly associated with psychological impairment.

According to survey conducted in Canada Significant associations were shown between PI and the following: being female, tobacco use, not meeting physical activity and screen-time recommendations, and inadequate consumption of breakfast and vegetables[3].

In another cross-sectional survey conducted as part of the Healthy School Development Project (HSDP) in four representative countries: Laos, Mongolia, Nepal, and Sri Lanka in 2019. family factors (i.e., parental understanding and monitoring, and parental tobacco and alcohol use), and school factors (i.e., having close friends, not bullied, school attendance, and health education) were among associated factors[23] .

In 2020 in Morocco, according to a nationally representative cross-sectional data analysis, Female sex, older age, bullying victimization, infrequently physically attacked, frequent participation in physical fights, having no close friends, frequent experience of hunger, parental emotional neglect, parental disrespect of privacy, school truancy, sedentary behavior, and having sustained a single or multiple serious injuries (in the previous year) were all linked to psychological distress in adjusted logistic regression analysis[20].

In 2018, Mekelle city performed a school-based cross-sectional research. Psychological discomfort was substantially connected with current alcohol consumption, physical fights, contact sexual abuse, non-contact sexual abuse, and being bullied in Ethiopia[12].

Conceptual Framework

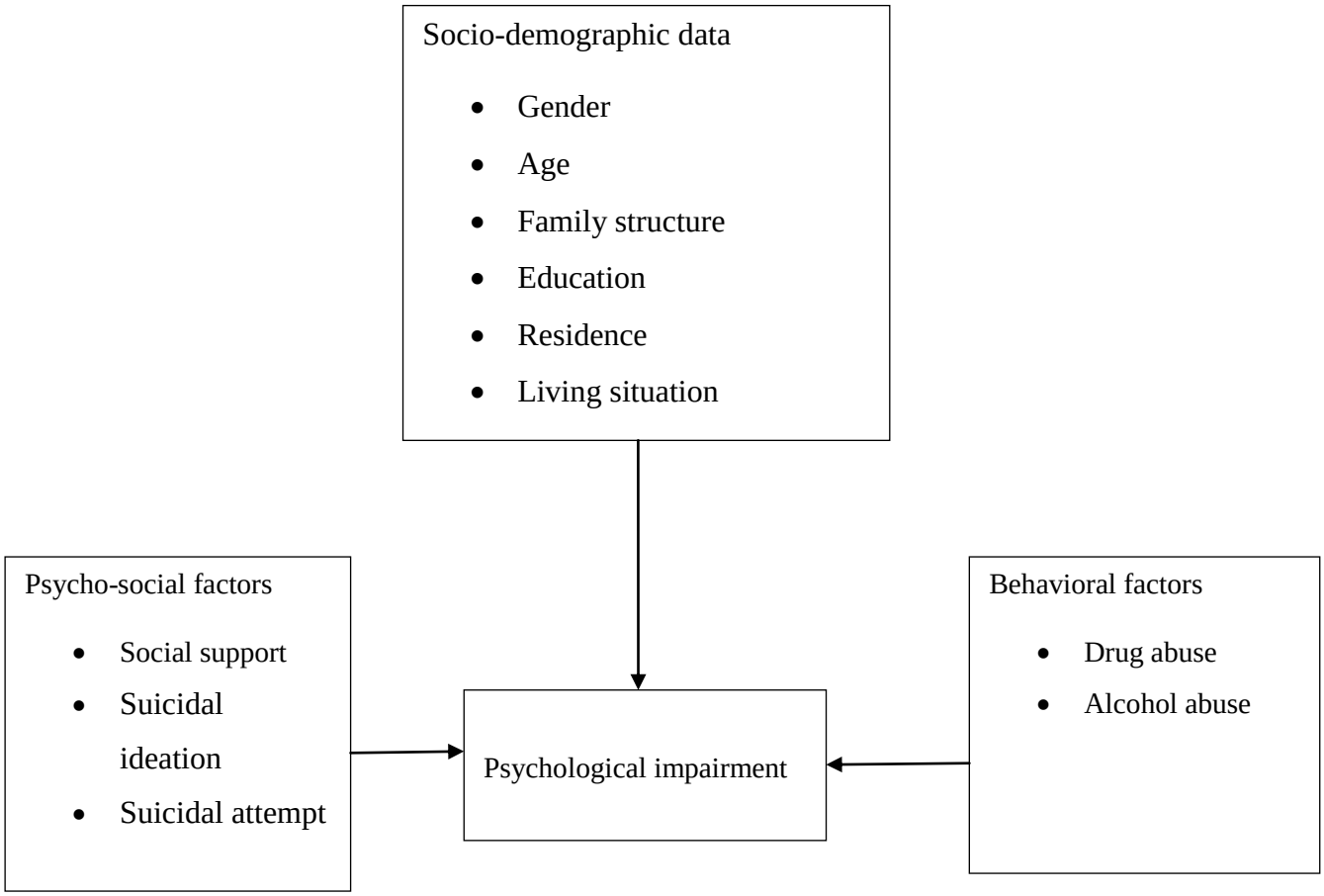

Figure 1: ***An analytical conceptual framework of associated factors for psychological impairment*** [26]

3. Objective

3.1 General Objective

- To assess prevalence and associated factors of psychological impairment Among Adolescents Attending Yaberus High School In Wolkite Town,Gurage Zone, SNNPR,Ethiopia 2022

3.2 Specific Objective

- To identify factors associated with psychological impairment Among Adolescents Attending Yaberus High School In Wolkite Town,Gurage Zone,SNNPR,Ethiopia 2022.
- To determine magnitude of psychological impairment Among Adolescents Attending Yaberus High School In Wolkite Town,Gurage Zone,SNNPR,Ethiopia 2022.

4.Methods And Materials

4.1 Study Period and Study Area

This study was conducted at Yaberus Secondary and Preparatory School inWolkite town, Southern Ethiopia from April to June 15,2022 . Wolkite town is located 157.96 km from Addis Ababa capital of Ethiopia. Yaberus high school was established in 1973, according to the directorial office of Yaberus high school Currently, the school have total of 119 (male =86 and female=33) staffs and 4462 students who are admitted to the school both in regular and night programs from grade 9-12 (grade 9 =959 ,grade10=940 ,grade 11=938 and grade 12 have 1625 students) among these 2018 are Males and 2445 of them are females.

4.2 Study Design

A Institution -based cross-sectional study was used to assess prevalence and associated factors of psychological impairment Among Adolescents Attending Yaberus High School In Wolkite Town,Gurage Zone, SNNPR, Ethiopia 2022 .

4.3 Population

4.3.1 Source Population

All high school students in wolkite town were the source population.

4.3.2 Study Population

All students in the randomly selected from yaberus high schools were the study population.

4.4 Inclusion and Exclusion Criteria

4.4.1 Inclusion Criteria

- All high school students with range between 10 to 19

4.4.2 Exclusion Criteria

- All high school Students under 10 years of age and above 19 years of age
- Those students who is seriously ill during the data collection were excluded.

4.5 Sample Size and Sampling Procedure

Sample size was determined by using single population proportion formula by considering the following assumptions; using the prevalence as 34.9% (from similar study done among secondary school students in Mekele town, Ethiopia 2020).Confidence interval of 95% and margin of error 5% and 10% of non-respondent rate.

$$n = z^2 p(1-p)/w^2$$

Where, n= required minimum sample size

Z= z-score value corresponding to a given level of confidence

p= estimated population proportion

w= allowable margins of error

$$n = \frac{(1.96)^2 \times 0.349(1-0.349)}{0.05^2} = 349.123 \approx 349$$

The minimum sample size determined is 349. An additional 35 is added to cover for non-response, Non-response plus sample size calculated= 349+35=384

Total targeted number of participants =384×2=768 (design effect)

Final sample size was= 768

Stratified multistage sampling technique was used to select a representative sample of students. One schools from 3 public schools and 1 private school was selected randomly. The total sample for each grade from grade 9 to 12 of the selected school was proportionally allocated based on their student size. Finally, the study subjects from each grade were selected by using a lottery method.

4.6. Variables

4.6.1 Dependent Variable

- Presence of Psychological impairment

4.6.2 Independent Variables

- Socio demographic factors (older age, female sex),
- social distresses (interpersonal violence),
- socio environmental factors (experience of hunger, low peer and low parental support and school truancy) and
- health risk behaviours(substance use, sedentary behaviour, sexual behaviour and injury)

4.7 Operational Definition

psychological impairment: defined as a state of emotional suffering characterized by symptoms of depression and anxiety[27].

Adolescents : individuals in the 10-19 years of age[28].

Health risk behavior :acts that increase the risk of diseases or injury which subsequently leads to disability ,death ,social problem or mental distress[29].

4.8 Data Collection Procedure and Quality assurance

4.8.1 Data Collection Procedure

Data were collected by investigators using a structured self-administered questionnaire which has four parts. The first part of the questionnaire captured the socio demographic characteristics of the study participants.

The second part of the questionnaire is the youth self-report version of Pediatric Symptom Checklist (Y-PSC), which was psychosocial screen designed to facilitate the recognition of cognitive, emotional, and behavioral problems and used to estimate the prevalence of psychological impairment in students. The Y-PSC can be administered to adolescents ages 11 and up.

The Y-PSC consists of 35 items that are rated as "Never," "Sometimes," or "Often" present and scored 0, 1, and 2, respectively. The total score is calculated by adding together the score for each of the 35 items. For the Y-PSC cutoff score of 30 or higher indicates psychological impairment.

Third part of the questionnaire is ASSIST which is used to asses about behavioral factors, which include history of substance use (i.e alcohol use, khat chewing, and cigarette smoking). Reliability and validity evidences based on internal structure (Exploratory and Confirmatory Factor Analyses) and on the relation to other variables were obtained. Excellent internal consistency was found for Total Substance Involvement (α = .92) and for Specific Substance Involvement scores (α = .88 - .96)[30]

The final part of questionnaire is about psychological factor like social support, Suicidal thought or Suicidal attempt. The internal consistency of the SBQ-R indicates that its items maintain a moderate degree of interrelation in a population with severe mental disorders. Ideally, the Cronbach's alpha is between 0.8 and 0.9, however this coefficient is influenced by the number of items, so that 0.64 may be acceptable on a scale of 4 items [31].

4.8.2 Data Quality Assurance

To assure the quality of the data the questionnaire was pre-tested 1 week before the actual data collection time on 5% of the calculated sample size out of the study area in Melke Tsedik Secondary School and appropriate modification was made. Finally, The collected data were reviewed and checked for completeness before data entry and incomplete data were discarded.

4.9 Statistical Analysis

The data were first coded, entered and cleaned using with manual method and some others were checked with scientific calculator, then it was analyzed. The socio demographic characteristics and other factors of respondents were analyzed by descriptive statistics. Bivariate logistic regression analysis was performed to identify the association of each independent variable with the outcome variables. All variables with a probability value of ≤0.20 at bivariate logistic regression analysis were entered into the multivariate logistic regression model to control the possible effect of confounders. A probability value of less than 0.05 was considered statistically significant. Results were presented in the form of tables using frequency and summary statistics such as mean and percentage to describe the study population in relation to relative variables and discussed in the context of previous results.

4.10 Ethical Consideration

Ethical approval was first obtained from the Wolkite University prior to data collection. Official letters of cooperation were written to all concerned bodies to obtain their co-operational in facilitating the study. Data collectors were obtain informed verbal and written consent from individual participants about the purpose and benefit of the study along with their right to refuse the participation. To ensure privacy, students were seated sufficiently far apart so that they could complete their questionnaires without being seen by other students. The study participants with psychological impairment were linked to psychiatric counseling service since the school has none.

5. Result

Socio-Demographic Characteristics

A total of 768 students participated in the study with a response rate of 92% (n = 706). However, 62(8%) students were excluded due to missing information on psychological impairment. Of the total respondents, 398 (56.4%) were females. The majority (45.2%) of the respondents were in the age range of 16 - 17 years. About 88% of students were from urban with a majority being Gurage by ethnicity (53.8%) and Muslim by religion (44.1%). Among the respondents, 546 (77.3%) lived with both parents.

Table 1 ***Socio-Demographic Characteristics of yaberus Secondary School Students in wolkite City, 2022***

Variables		Frequency	Percent
Sex	Male	308	43.6
	Female	398	56.4
Age	10-15	88	12.4
	16-17	319	45.2
	18-19	299	42.4
Family structure (living arrangements)	Guardian/ Caretaker	64	9.1
	Single parent	96	13.6
	Both parent	546	77.3
Residence	Urban	623	88.2
	Rural	83	11.8
Religion	Orthodox	295	41.8
	Muslim	311	44
	Protestant	93	13.2
	Others*	7	1

Ethnicity	Gurage	380	53.8
	Oromo	60	8.5
	Amhara	179	25.4
	Others**	87	12.3
Grade	Grade 9	130	18.4
	Grade10	129	18.3
	Grade11	217	30.7
	Grade12	230	32.6

Notes: *Adventist and catholic.**Kambata,Hadiya,Wolita..

Behavioral Characteristics of the Participants

From a total of 706 study participants, 62 (8.8%) had drunk alcohol at least once in their lifetime, and 40 (5.7%) of the study subjects had been chewing khat at least once in their life, and 30 of them chewed khat weekly in the last three months. Out of the total participants, 12 (1.7%) had history of smoking Tobacco at least once in their lifetime, whereas six of them smoked tobacco weekly in the last three months. Among the students who participated in this study 35(5%) of them had taken sedative or sleeping pills in the past three month (Table 2).

Table 2: **Distribution of yebarus Secondary School Students by their Behavioral Characteristics at wolkite Town,2022**

Variables		Frequency (n=706)	Percent
Khat use			
Ever use history	Yes	40	5.7
	No	666	94.3
Number of times used(In the past three months)	Once or twice	4	10
	Weekly	30	75
	Monthly	-	-
	Daily or almost daily	6	15
Alcohol use			
Ever use history	Yes	62	8.8
	No	644	91.2
Number of times used(In the past three months)	once or twice	22	35.5
	Weekly	39	62.9
	Monthly	1	1.6
	Daily or almost daily	-	-
Tobacco use			
Ever use history	Yes	12	1.7
	No	694	98.3
Number of times used(In the past three months)	Once or twice	-	-
	Weekly	6	50
	Monthly	-	-
	Daily or almost daily	6	50
Sedative or sleeping pills use			

Ever use history	Yes	35	5
	No	671	95
Number of times used(In the past three months)	Once or twice	14	40
	Weekly	-	-
	Monthly	21	60
	Daily or almost daily	-	-

Psycho-Social Characteristics of the Participants

Almost one-quarter of the study participants (22.5%) had a previous history of suicidal thoughts(ideation), whereas (17.1%) had suicidal attempt history(Table 3)

Table 3 ***Distribution of Psycho-Social Characteristics of Yaberus Secondary School Adolescents in wolkiteTown, 2022***

Variables		Frequency (n=706)	Percent
Suicidal thought(ideation)	Yes	159	22.5
	No	547	77.5
Suicidal attempt	Yes	121	17.1
	No	585	82.9
Suicidal attempt risk	Yes	97	13.7
	No	609	86.3

Regarding social support, Out of the total study participants, 438 (33.4%) had more than one-third (40.9%) of respondents had been score 9–11 which is considered as having moderate social support (figure 2).

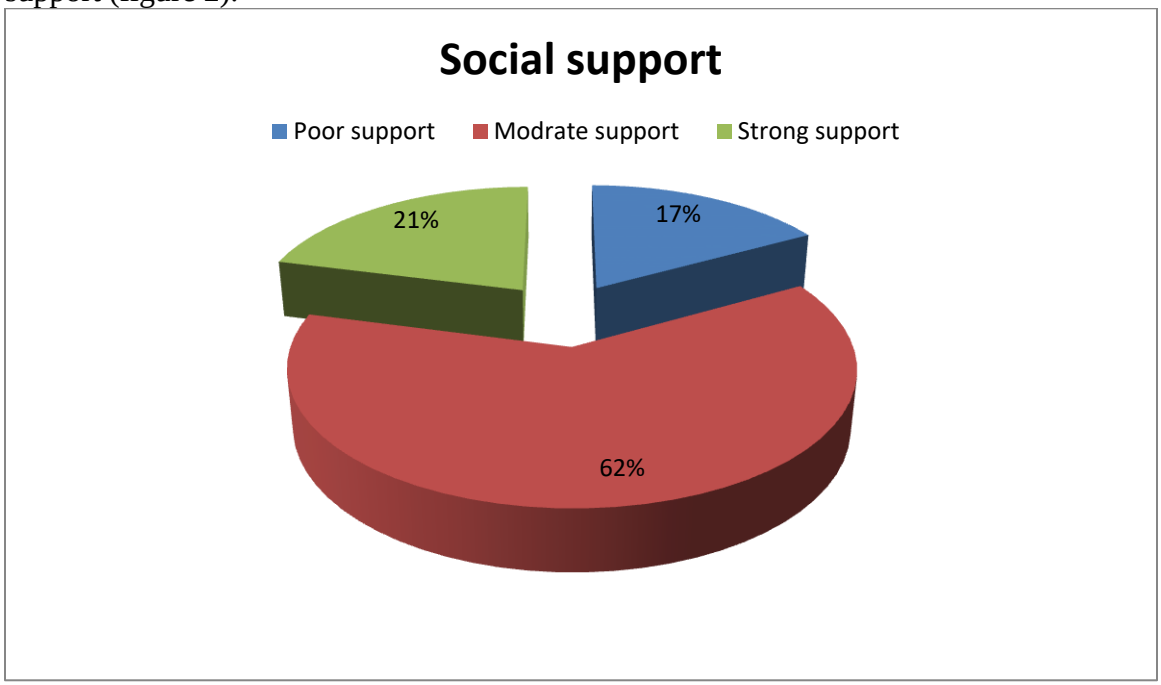

Figure 2**: Social support distribution** ***Yaberus Secondary School Adolescents in wolkite Town,2022.***

Prevalence of Psychological impairment

Out of the 706 students the overall prevalence of psychological impairment among the study participants was 31.4% of these 99 (44.6%)of the students were males and 123(55.4%) were females.

Factors Associated With Psychological Impairment

From bivariate logistic regression analysis Residence, Family structure (living arrangements) of the students, Substance use, Social support, history of suicidal ideations and history of suicidal attempt had fulfilled the criteria of $p \leq 0.2$ significance level were taken into consideration for multivariable logistic regression analysis. On multivariable logistic regression analysis after adjusting all confounding factors Substance use, being having poor Social support and history of suicidal ideations, were significantly associated with psychological impairment ($P < 0.05$).

In case of Substance use , the odds of developing psychological impairment among those students using substance was 3.951times more likely to develop psychological impairment as compared to those student not using substance [AOR=3.951; 95% CI: (2.357, 6.622)]. The odds of developing psychological impairment was 2.232 times greater than among those who had having poor Social support compared to those who had Strong social support [AOR=2.232; 95% CI: (1.145, 4.353)].Participants who have history of suicidal ideations were 4.39times more likely to develop psychological impairment[(AOR=4.39, 95% CI=(2.370, 8.159)] as compared with their counterparts.(Table 4)

Table 4: **Factors Associated with Psychological impairment Among Yaberus Secondary School Students in wolkite town, 2022**

Variables		Psychological impairment		COR (95% CI)	AOR (95% CI)	P value
		Yes	No			
Residence	Rural	36	47	1.800(1.128, 2.870)	1.089(0.587, 2.020)	0.787
	Urban	186	437	1	1	
Family structure	Guardian	41	23	1.070(0.555,2.063)	0.97(0.39, 2.44)	0.232
	Single parent	60	36	1.36(0.92,1.99	1.28(0.64, 2.57)	0.675
	Both parent	121	425	1	1	
Substance use	Yes	72	47	4.463(2.95,6.736)	3.951(2.357, 6.622)	**<0.001***
	No	150	437	1	1	
Social support	Strong support	41	107	1	1	
	Moderate Support	127	311	2.135(1.284, 3.552)	1.526(0.949, 2.455)	0.081
	Poor support	54	66	2.004(1.323, 3.033)	2.232(1.145, 4.353)	**0.018***
Suicidal ideation	Yes	103	56	6.615 (4.508,9.708)	4.397(2.370, 8.159)	**<0.001***
	No	119	428	1	1	
Suicidal attempt	Yes	70	51	3.910(2.607, 5.865)	1.393(0.715, 2.715)	0.330
	No	152	433	1	1	

Notes: *Significance at p-value e <0.05

Discussion

The current study showed that the prevalence of psychological impairment among Adolescents attending Yaberus high school in Wolkite town was 31.4%. The finding goes in line with studies carried out in Mekele[12] and Canada[3] where 34.9% and 35.1% of the study participants were found to be psychologically impaired respectively. However, This finding was lower compared to studies conducted in Saud Arabia (54%)[22],Uganda (57%)[24],Samara, Ethiopia (53.2%)[19]. The probable reason for the difference might be due to the differences in screening tools, study design, study period, the difference in socio-economic characteristics.

And it was higher than the study done in India[21], Tanzania[17] ,Nigeria[20] and Zambia[9] with a rate of 20.8, 23.0, 24.2, 15.7 respectively. The possible explanation for the difference with the above studies can be due to sample size difference, the screening tools used, study design, study period, the difference in socio-economic characteristics.

In this study, the likelihood of developing psychological impairment among those students using substance was 3.95 times more likely to develop psychological impairment as compared to those student not using substance [AOR=3.95; 95% CI: (2.357, 6.622)]. The finding is consistent with other studies in Canada[3], India[21]and Mekele[12]. High rates of substance use can lead to serious consequences in regards to physical and mental health, as well as psychosocial well-being[5].

In this study, social support was also found to be another determinant factor for psychological impairment in students. In this study, students with poor social support were more than two times more likely to have psychological impairment as compared to those students with strong social support [AOR=2.232; 95% CI: (1.145, 4.353)]. This finding was supported by other studies including a multi-country study of four representative countries: Laos, Mongolia, Nepal, and Sri Lanka in 2019[23]. The requirement for new social interaction with other students having mixed culture and separation from pre-existing family/social support could also have their own contribution for the observed higher level of psychological impairment among students in the earlier years of study[32].

Moreover, psychological impairment was found to be significantly associated with "having history of suicidal ideations" in the past years as compared with their counterparts [(AOR=4.39, 95% CI=(2.370, 8.159)].This finding was supported by a study done in District of Kerala, India[21].

Conclusion

The prevalence of psychological impairment among secondary school adolescents in this study was high. The finding indicates that approximately one in every three school-going adolescent have some symptoms of psychological impairment. Besides, the results of this study revealed that substance use, poor social support and suicidal ideation were factors significantly associated with psychological impairment in this group.

Recommendation

we recommend that to strengthen activities like, incorporating mental health services with substance for adolescents and to institute counseling and mental health programs for secondary school students by the Ministry of Health and other stakeholders in schools which can help in reducing psychological impairment directed to adolescent student with emphasis on effective measures to reduce the likelihood of substance use , poor social support and suicidal ideation.

In addition increasing social support from family, peers, and friends is recommended to enable adolescents to effectively deal with the psychosocial challenges they are confronted with at this transition phase of their life.

Limitation of the study

This study has some important limitations that should be kept in mind when interpreting the results. First, the cross-sectional nature of the study design does not confirm definitive cause and effect relationship. Second, the study may prone to reporting bias since the data was collected based on self-reported information. Thirdly, the fact that our study focused on only in-school adolescents means the results are not generalizable to all adolescents in the country. Finally; reports for some of the questions were past history or encounters which are prone to recall bias.

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7. ANNEX

7.1 Questionnaire

Annex I. Information sheet and consent form

Hello! My name is_____ I am the member of researchers teams of Wolkite University College of Medicine and Health Science Department of Nursing. Now I am going to conduct a research on prevalence of psychological impairment and its associated factor Among Adolescents Attending Yaberus High School In Wolkite Town. For Bachelor of degree in nursing. I kindly request you to lend me your attention to explain you about the study and being selected as the study participant.

Title: prevalence of psychological impairment and its associated factor Among Adolescents Attending Yaberus High School In Wolkite Town,Gurage Zone, SNNPR,Ethiopia 2022

Purpose of the study

The aim of this study is To identify factors associated with psychological impairment…Wolkite Town South Region, Ethiopia . Moreover, the aim of this study is to write a research project as a partial requirement for the fulfillment of bachelors Program in nursing for the investigators.

Risk and Benefit

The risk of being participating in this study is very minimal, but only taking few minutes from your time. There would not be any direct payment for participating in this study. But the findings from this research may reveal important information for the local health planners.

Confidentiality

The information collected will be kept secured and strict confidentiality observed. Questionnaires will only be identified with the study number and will not bear the participant's name. Only the overall findings will be discussed and shared. No specific information about participants will be discussed or shared.

Right to Refusal or Withdraw

You have the full right to refuse from participating in this research. You have also the full right to withdraw from this study at any time you wish.

Contact address: If there are any questions or enquires any time about the study or the procedures, please contact:

1.Ashenafi Didimos: phone: +251936458928 ,Email ashenafididimos8928@gmail.com

2. Abubeker Fetu: phone: +251938295549

3. Abinet Desalegn: phone : +251906191489

Name_____ Date_____

Declaration of informed voluntary consent:

I have read/ was read to me/ the participant information sheet. I have clearly understood the purpose of the research, the procedures, the risks and benefits, issues of confidentiality, the rights of participating and the contact address for any queries. I have been given the opportunity to ask questions for things that may have been unclear. I was informed that I have the right to withdraw from the study at any time or not to answer any question that I do not want. Therefore, I declare my voluntary consent to participate in this study with my initials (signature).

Name and signature of participant: _____ _____ Date _____

Name and signature of data collector: _____ _____ Date _____

QUESTIONNAIRE

Part 1:socio demographic data

S №	Category	Response
1	Age	_____ year
2	Sex	1. Male 2. Female
4	Residence	1. Urban 2. Rural
5	Occupation	1. Working 2. Un employed 3. Student 4. Other benefits
6	Education status	1. Grade 9 2. Grade10 3. Grade 11 4. Grade12
7	Family size	1. 0-3 2. 4-7 3. 8-11 4. >11
8	Is your mother alive?	1. Yes 2. No If yes, what is her age? _____ Where is she living? _____
9	Is your father alive?	1. Yes 2. No If yes ,what is his age? _____ Where is he living? _____
10	What is the number of children born alive?	1. 0-3 2. 4-7 3. 8-11 4. >11
11	Family structure (living arrangements)	1. Guardian 2. Single parent 3. Both parent
12	Language spoken in the family	1. Amharic 2. Guragigna 3. Afan oromo 4. Other/ specify_____
13	Religion	1. Christian 2. Muslim 3. Protestant 4. Other/ specify_____
14	Ethnicity of parents/ care takers	1. Gurage 2. Oromo 3. Amhara 4. Other/ specify _____

Part 2: Pediatric Symptom Checklist

S№	Heading	Never	Sometimes	Often
1	Complains of aches and pains			
2	Spends more time alone			
3	Tires easily, has little energy			
4	Fidgety, unable to sit still			
5	Has trouble with teacher			
6	Less interested in school			
7	Acts as if driven by a motor			
8	Daydreams too much			
9	Distracted easily			
10	Is afraid of new situations			
11	Feels sad, unhappy			
12	Is irritable, angry			
13	Feels hopeless			
14	Has trouble concentrating			
15	Less interested in friends			
16	Fights with other children			
17	Absent from school			
18	School grades dropping			
19	Is down on him or herself			
20	Visits the doctor with doctor finding nothing wrong			
21	Has trouble sleeping			
22	Worries a lot			
23	Wants to be with you more than before			
24	Feels he or she is bad			
25	Takes unnecessary risks			
26	Gets hurt frequently			
27	Seems to be having less fun			
28	Acts younger than children his or her age			
29	Does not listen to rules			
30	Does not show feelings			
31	Does not understand other people's feelings			
32	Teases others			
33	Blames others for his or her troubles			
34	Takes things that do not belong to him or her			
35	Refuses to share			

Part 3: ALCOHOL, SMOKING AND SUBSTANCE INVOLVEMENT SCREENING TEST(ASSIST)

In your life, which of the following substances have you ever used? (non-medical use only)	**NO**	**YES**
Tobacco products		
Alcoholic beverages		
Khat chewing		
Marijuana		
Cocaine or Crack		
Amphetamines or Stimulants		
Inhalants		
Sedatives or Sleeping Pills		
Hallucinogens		
Heroin, Morphine, Pain Medication		

If your answer is "Yes" to any of the above items, answer the following question.

In the past three months, how often have you used the substances mentioned (first drug, second drug, etc.)	**NEVER**	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Tobacco products					
Alcoholic beverages					
Khat chewing					
Marijuana					
Cocaine or Crack					
Amphetamines or Stimulants					
Inhalants					
Sedatives or Sleeping Pills					
Hallucinogens					
Heroin, Morphine, Pain Medication					

Oslo 3-item Social Support Scale (O3SS)

	None	1 or 2	3–5	5+
'How many people are so close to you that you can count on them if you have serious personal problems?				

	A lot of concern and interest	some concern and interest	uncertain	little concern and interest	No concern and interest
How much concern do people show in what you are doing?					

	Very easy	Easy	Possible	Difficult	Very difficult
'How easy is it to get practical help from neighbours if you should need it?'					

SBQ-R Scoring

INSTRUCTIONS: Please circle the number beside the statement or phrase that best applies to you. CIRCLE ONLY ONE ANSWER for each question.

1. 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
2. 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)
3. 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
4. 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