ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH DEPARTMENT OF REPRODUCTIVE, FAMILY AND POPULATION HEALTH

SLEEP QUALITY AND DEPRESSION AMONG ADOLESCENTS AT SECONDARY SCHOOLS IN ADAMA CITY, ETHIOPIA

By: HANA SERBESA (Bsc)

A RESEARCH PROPOSAL TO BE SUBMITTED TO ADDIS ABABA UNIVERSITY, COLLEGE OF HEALTH SCIENCES, SCHOOL OF PUBLIC HEALTH FOR THE PARTIAL FULFILLMENT OF THE DEGREE OF MASTERS OF PUBLIC HEALTH IN REPRODUCTIVE, FAMILY AND POPULATION HEALTH SPECIALTY

DECEMBER , 2024

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Title	Sleep Quality and Depression among Adolescents at Secondary Schools in Adama City, Ethiopia
Duration of study	From October 2024 –June 2025
Total budget	25000 birr

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First of all, I would like to thank Almighty God for giving me the strength, knowledge, ability, and opportunity to undertake this proposal. I would also like to convey my deep and sincere gratitude to my advisors Dr solomon Emyu and Dr Hewan Getachew for their invaluable guidance, support, advice, comments, suggestions, and provisions that helped in the completion of this proposal.

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Acronyms

AOR	Adjusted Odds Ratio
CI	Confidence interval
COR	Crude odds ratio
PHQ-9	Patient Health Questionnaire-9
PSQI	Pittsburgh Sleep Quality Index
SPSS	Statistical Package for Social Sciences
WHO	World Health Organization

Summary

Background: Adolescence involves key changes in physical growth, emotions, and social roles. Adequate sleep is essential for health and emotional stability during this period. The Pittsburgh Sleep Quality Index (PSQI) links poor sleep to lower academic performance and a higher risk of depression. Adolescence is a common period for the onset of depression In Ethiopia, there is limited research on how sleep quality impacts depression, making it crucial to explore these connections further.

Objective: To assess sleep quality and depression among adolescents at secondary schools in Adama city, Ethiopia

Methods: Institution-based cross-sectional study design will be employed and multi-stage sampling will be used. A total of 844 adolescents will be participants from the selected schools. Data will be collected through structured, paper-based questionnaires administered through interviews by trained nurses. Data will be analyzed using SPSS version 26.Sleep quality will be measured using the Pittsburgh Sleep Quality Index (PSQI)**,** Depression will be measured using the PHQ-9**.**Descriptive statistics will be performed to summarize frequencies and percentages for categorical variables and means and standard deviations .bivariate ordinal logistic regression will be conducted followed by multivariate ordinal logistic regression .Additionally, to explore the strength and direction of the relationship between sleep quality and depression, Spearman's rank correlation will be used

Work plan and Budget: The study will be conducted from October to June .A total of **25,000** ETB will be needed for the completion of the study.

Keywords: sleep quality, Depression

1. Introduction

1.1 Background of the study

Depression is a common mental disorder marked by a persistent low mood or loss of interest in activities, disrupting daily life. According to the WHO, it differs from regular mood changes, affecting relationships, school, and work. Women are more likely to experience depression, often linked to abuse, losses, or stressful events. However, it can affect anyone, regardless of age or background.(1)

Sleep, a natural state where the body rests and recovers, plays a critical role in mental health. Teens (14-17) need at least 8.5 hours of sleep each night, while young adults (18-25) require at least 7 hours. However, insufficient sleep, which is common in these age groups, can worsen mental health issues like depression, creating a cycle that affects overall health and daily performance.(2)The WHO defines adolescents and young adults as those aged 10 to 24. During this time, many changes happen, including continued brain development, which affects sleep patterns. Teens often have a natural delay in when they feel sleepy, causing them to stay up later, especially older teens. This is linked to two key processes that control sleep: the body's internal clock and the need for sleep. These changes explain why sleep patterns differ in this age group(3)

Adolescence is the period when a person moves from childhood to adulthood.Hence, It includes changes in physical growth, emotions, and social roles, and these changes can happen at different times for different people.(4) Getting enough sleep is crucial for physical health, thinking clearly, and emotional balance during this time. Quality sleep is especially important. It can be measured using the Pittsburgh Sleep Quality Index (PSQI). (5) According to the PSQI, poor sleep quality can lead to problems such as lower academic performance and a higher risk of mental health issues like depression(6)

Depressive disorders are a major health concern, often starting in adolescence and can be long-lasting and come back repeatedly(7) To assess depression, validated tools such as the Patient Health Questionnaire-9 (PHQ-9) are used to measure the severity of depressive symptoms. (8)

Many research shows that poor sleep can lead to depression, which in turn can reduce overall functioning in life.(9)

In Ethiopia, adolescent mental health is a growing concern; with poor sleep quality linked to depression. Researches show that inadequate sleep can lead to depressive symptoms in young people. Addressing sleep problems early through screening and promoting better sleep habits may help prevent depression.(10)

Improving sleep quality can help prevent depression, but limited research has explored its role in adolescent mental health. Effective prevention strategies emphasize targeting both specific and non-specific risk factors, enhancing protective factors, and adopting developmental approaches tailored to adolescents. Programs utilizing cognitive behavioral therapy, interpersonal approaches, and family-based strategies have shown the most promise. These approaches offer hope for reducing depressive disorders in adolescents. (11) This study aims to contribute to this framework by exploring the connection between sleep quality and adolescent depression.

1.2 Statement of the problem

According to the World Health Organization (WHO), depression is estimated to affect 1.1% of adolescents aged 10–14 years and 2.8% of those aged 15–19 years. (12) In Ethiopia, the prevalence of depression among students is on the rise. A meta-analysis, which combines results from various studies, found that approximately 35.2% of Ethiopian students suffer from depression. (13)

Depression in adolescents has severe consequences, impacting education, employment, and physical health, and is often accompanied by comorbid disorders. It is linked to risky behaviors like substance use, smoking, and binge eating, with over 65% of affected adolescents engaging in at least one. Depression also increases the risk of suicidal ideation and is influenced by socioeconomic factors like poverty, family instability, and lack of mental health care, as well as environmental factors such as peer pressure, bullying, and trauma. (14) (15)

Research consistently shows a significant connection between sleep quality and depression, with poor sleep, such as difficulty falling or staying asleep, increasing the risk of developing depressive symptoms(9)(16). Adolescents who experience disrupted sleep are more likely to face depression and other mental health issues. Quality sleep is crucial for adolescents' overall well-being, with studies revealing that poor sleep has a greater impact on mental health than physical health (17). Most aspects of sleep quality are linked to mental health, while only a few are associated with physical health. Poor sleep is strongly tied to a higher risk of developing depression and other mental health problems(18)

Lack of sleep is linked to various health and academic issues, with mood and depression being particularly affected. Adolescents are vulnerable to sleep disturbances, with many experiencing poor sleep and higher rates of depression.(19) Sleep disorders like insomnia and obstructive sleep apnea (OSA) increase the risk of depressive symptoms and suicide attempts. Treatment of sleep disorders, such as OSA, has been shown to reduce depressive symptoms, highlighting the importance of addressing sleep issues for mental health in adolescents.(20)

Addressing sleep quality and depression among adolescents requires a holistic approach, guided by the biopsychosocial model. Biological, psychological, and social factors interact to influence sleep patterns and mental health. Understanding how these interconnected factors affect adolescents' sleep and depression can inform more effective interventions. This study aims to explore these relationships and provide insights into improving adolescent mental health outcomes.

1.3 Siginficance of the study

The findings from this study will provide a detailed understanding of how sleep quality is related to depression among adolescents. By examining this connection, we aim to uncover how poor sleep can contribute to depression and how better sleep habits might help prevent or reduce these symptoms.

With these insights, recommendations will focus on improving sleep patterns to enhance mental health by addressing sleep issues before they lead to or worsen depressive symptoms. Sleep education programs in schools can help students understand the importance of sleep hygiene for mental well-being. Parent education programs can raise awareness about the crucial role of sleep in mental health and assist families in creating supportive environments. Moreover, schools and communities can collaborate on after-school physical activity programs to boost physical health and improve sleep quality. These changes will help create environments that prioritize mental health, supporting adolescents academically and emotionally.

Additionally, this research will fill up an existing gap in the current body of knowledge, as there are not many studies that specifically focus on how sleep quality and depression are related in this age group. By providing new insights, the study will also help guide future research on similar topics, making it a valuable resource for others who want to explore adolescent mental health further.

2. Literature review

2.1 Introduction

This literature review is grounded in the biopsychosocial model, which recognizes the interconnectedness of biological, psychological, and social factors in influencing adolescent sleep quality and depression. By integrating these dimensions, the review aims to provide a comprehensive understanding of the complex factors affecting adolescent mental health.

2.1 Depression among Adolescents

According to the American Psychiatric Association, depression is a serious mental condition that affects how individuals feel, think, and act. Symptoms range from sadness, irritability, and hopelessness to changes in appetite, sleep, and energy levels. It may also involve feelings of worthlessness, difficulty concentrating, and thoughts of death or suicide. These symptoms can vary in severity and impact daily functioning.(20)

The global point prevalence rate of elevated self-reported depressive symptoms in adolescents from 2001 to 2020 was 34% The Middle East, Africa, and Asia have the highest prevalence of elevated depressive symptoms(21). Supporting this, an Iranian study found that the prevalence of depression among adolescents was 43.55%.(22)

In Southwest Nigeria, the prevalence of depression in adolescents was 21.2%. Among those screened, 16.1% had moderate depression, 4.6% had moderately severe depression, and 0.5% had severe depression symptoms. (23) In a Kenyan study, the overall prevalence of depression in adolescents was 45.90%. Among those surveyed, 35.0% reported mild depressive symptoms, 29.2% had moderate symptoms, and 16.9% experienced severe depressive symptoms.(23) .

In Ethiopia, the pooled prevalence of depression among students was found to be 35.52%.(24) In a study conducted in Jimma, the prevalence of depression among adolescents was found to be 28% .The PHQ-9 depression severity scale revealed that 18.5% of the adolescents had moderate depression, 8.2% had moderate to severe depression, and 1.3% had severe depression. (25)

Although depression is common among adolescents worldwide, there is little research on how sleep quality and depression are linked in Ethiopian adolescents. Few studies look at how factors like age or school year affect the level of depression in this group.

2.2 Sleep Quality in Adolescents

Many adolescents suffer from poor sleep quality, with prevalence varying across regions. These sleep disturbances are closely linked to mental health issues, including depression. Studies conducted in Brazil and Turkey have revealed that a large number of adolescents struggle with poor sleep quality. Specifically, in Brazil, 53% of adolescents have been found to suffer from poor sleep.(26) In Turkey, the rates are even higher, with 82.0% of adolescents experiencing poor sleep quality. (27) In India There is also a smaller group, 2.5%, who experience particularly severe sleep issues.(28)

The overall pooled prevalence of poor sleep quality among university students in Africa was 63.31% (29). Research studies conducted in Ethiopia have reported even higher rates of poor sleep quality. Specifically, these studies found that 55.8% and 62% of participants experienced poor sleep quality(30)(31)

A study in Brazil found that adolescents had trouble falling asleep, with a mean sleep latency of 1.12. Their sleep efficiency was low, with an average score of 0.73. Sleep disturbances were common, with an average score of 1.14, and they experienced daytime sleep dysfunction with a mean score of 1.27. These findings suggest that sleep issues are prevalent among adolescents and can affect their daily functioning. (26)

Among Ethiopian adolescents, 44.0% sleep six or fewer hours per night, and 52.7% report poor sleep quality. Sleep latency varies, with 36.7% taking 31–60 minutes to fall asleep. Daytime dysfunction affects 51.2% less than once a week, and 69.7% have high sleep efficiency. In a study of 576 medical students, 357 (62%) had poor sleep quality, with 27.1% experiencing a sleep latency of 16-30 minutes and a median latency of 25 minutes. (31)

Despite the strong evidence linking poor sleep to depression, few studies specifically explore this relationship among adolescents in Ethiopia. Additionally, existing research does not sufficiently address how socio-demographic factors influence sleep quality.

2.3 Biological Factors Influencing Sleep and Depression

Biological factors like including age, sex, significantly impact both sleep quality and depression. while some of the researchs done showed no stastical siginficance in their studies.

In Nepal Demographic factors such as sex, age, education of parents were not significantly associated with sleep quality.(32)A Turkish study found that poor sleep quality is significantly more prevalent among females. (33)

Studies from various regions have highlighted the influence of biological factors on adolescent mental health and sleep quality. In India, adolescents aged 15 years and older were found to have a higher likelihood of experiencing poor sleep quality, potentially due to hormonal changes during puberty that disrupt sleep regulation. (34)Similarly, in Ethiopia, sex was identified as a significant factor in multiple studies, with female adolescents being more vulnerable to mental health challenges(35)

Research in West Jimma, Northwest Ethiopia, and Eastern Ethiopia consistently showed that female adolescents are more prone to depression and internalizing problems. This heightened vulnerability is linked to hormonal fluctuations during adolescence, which increase sensitivity to stress and emotional difficulties. These findings underscore the critical role of age and sex in shaping adolescent health outcomes.(36)(37)

2.4 Psychosocial Factors Influencing Sleep and Depression

In Iran, adolescent sleep quality is influenced by demographic factors like age, gender, and socioeconomic status, as well as communication issues such as parental divorce and relationship dynamics. Academic performance and school type also play a significant role, alongside psychological factors like family mental health history and stressful events. Additionally, factors such as internet addiction and substance use further impact sleep quality. A study conducted in Nepal found that students who frequently shared their feelings with family had better sleep quality. However, time spent on the internet and using the internet before sleep were associated with poorer sleep. (22) (32)

Similarly, an Ethiopian study also confirms that students, particularly those in their second and third years of secondary school, are at higher risk for poor sleep quality, which is associated with increased stress and depressive symptoms. (38)

Two studies conducted in Nigeria highlighted the impact of educational settings on adolescent sleep quality. One study found that adolescents attending private schools had twice the odds of

experiencing poor sleep quality compared to their peers in public schools. Another study underscored the role of school-related factors, such as school schedules and educational environments, in influencing adolescent sleep patterns, further demonstrating how the school context can affect sleep quality.(39)

Studies have identified several psychosocial factors influencing sleep disturbances and depressive symptoms among adolescents. In China, poor relationships with teachers, feelings of loneliness, suicidal ideation, and running away from home were strongly associated with these issues. These social and emotional challenges can significantly impact an adolescent's mental health and sleep quality.(40)

In Ethiopia, lifestyle behaviors such as caffeine consumption, cigarette smoking, and khat use were found to contribute to prolonged sleep latency and poor sleep efficiency. These behaviors, often influenced by social contexts, highlight the link between adolescents' social habits and their sleep patterns.(41)

Additionally, psychosocial factors like alcohol consumption, parental neglect, and a family history of mental illness were found to be significantly associated with depression in Ethiopian students. This underscores the importance of family dynamics and social environments in shaping adolescents' mental health.(42)

A study conducted in Eastern Ethiopia found that the likelihood of a high-level externalizing problem score was higher among alcohol users, adolescents with uneducated fathers and those who experienced bullying at school .These findings highlight the significant influence of psychosocial determinants such as family background, environmental factors, and peer interactions on adolescent mental health. (35)

2. 5 Relationship between Sleep Quality and Depression

It is estimated that 20% of adolescents experience a depressive episode, and similarly, up to 25% report symptoms of poor sleep quality. This rate significantly increases among those suffering from depression, with up to 73% also experiencing a comorbid sleep problem. This highlights the strong connection between sleep quality and depression.(43)

A study conducted among American adolescents found that sleep deprivation significantly increases the risk of major depression. In crude analyses, the risk of developing major depression was elevated 4- to 5-fold among sleep-deprived adolescents. Even after adjusting for baseline depression in multivariate analyses, the risk remained 3 times higher .(44)

A study in China revealed a strong relationship between sleep quality and depression severity among adolescents. As depression severity increased, PSQI scores, indicating poorer sleep quality, also rose significantly.(45)

2.5 Conceptual Framework

This conceptual framework, based on the biopsychosocial model, explores how biological, psychological, and social factors influence sleep quality and depression in adolescents. Biological factors like age and sex impact sleep patterns and depression risk. Psychological aspects, including substance use, affect both sleep and mental health. Social factors, such as family income, family size, and peer influence, shape the adolescent's sleep environment and emotional well-being, collectively contributing to their overall mental health outcomes.

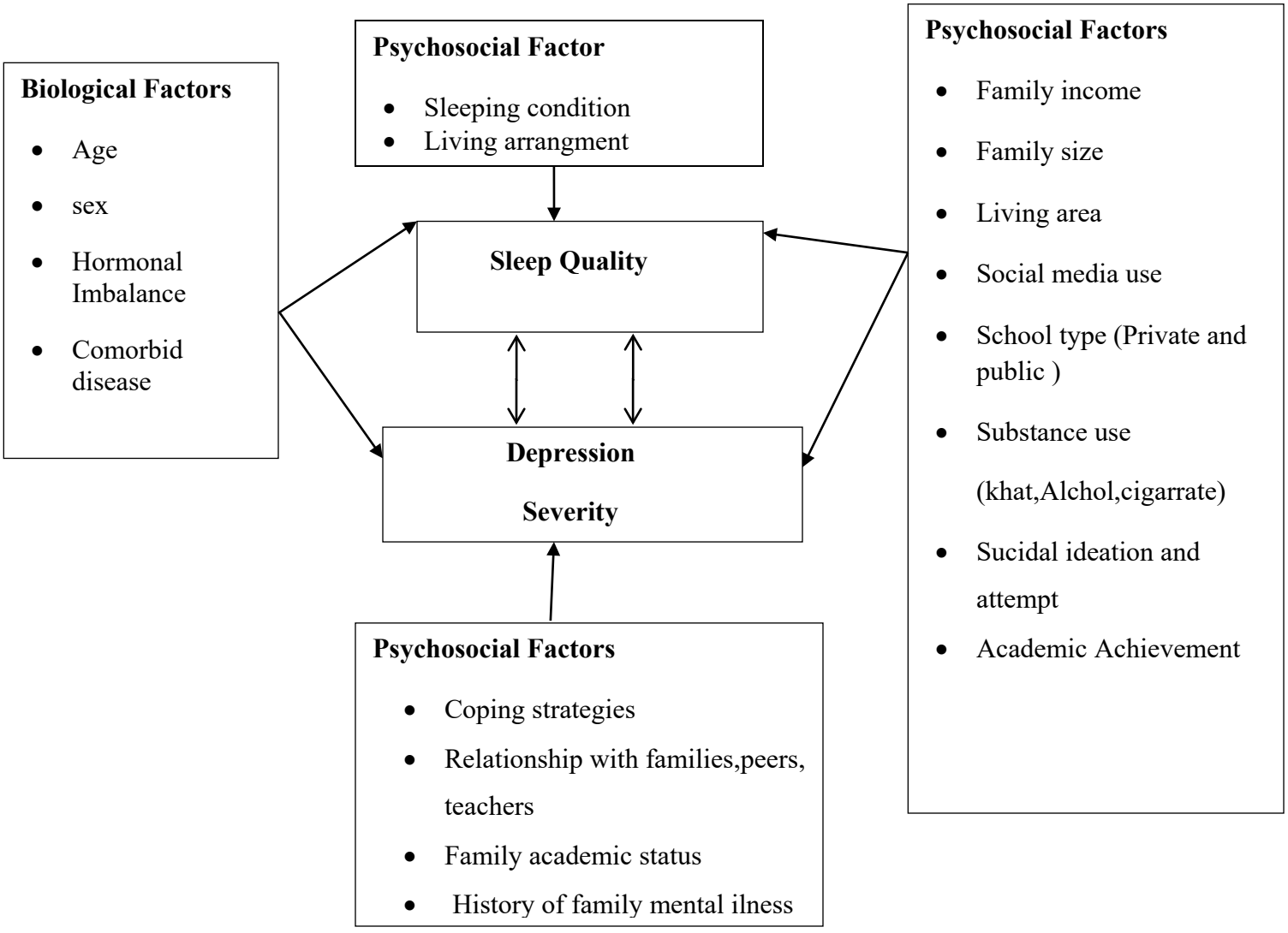

Figure 1: conceptual framework on Sleep Quality and Its Association with Depression among Adolescents at Secondary Schools in Adama City, Ethiopia

3. Objectives of the Study

3.1 General Objective

- To assess sleep quality and depression among adolescents at secondary schools in Adama city, Ethiopia

3.2 Specific Objectives

- To measure the poor sleep quality and depression level among adolescents in high schools of Adama
- To identify factors associated with poor sleep quality among adolescents in high schools of Adama
- To see the association between sleep quality and depression in high schools of Adama

4. Methods and Materials

4.1 Study area and period

The study will be conducted from February 2025- March 2025 in Adama city, Oromia Region, Ethiopia. Adama is in the East Shewa Zone 99km southeast of the capital, Addis Ababa. This city has a total population of 220,212, an increase of 72.25% over the population recorded in the 1994 census, of whom 108,872 are men and 111,340 women. With an area of 29.86 square kilometers, it has a population density of 7,374.82; all are urban inhabitants(46). Adama city has 111 governmental schools and 209 private schools.

4.2 Study design

An institution based cross-sectional study design will be employed.

4.3 Population

4.3.1 Source population

The source populations are all adolescents who are attending their education in high schools in Adama city in 2025.

4.3.2 Study population

The study population will consist of adolescents aged 15-19 who are currently attending high schools in Adama city in 2025. These adolescents will be selected randomly from a list of schools that have been chosen for the study.

4.4 Eligibility Criteria

4.4.1 Inclusion criteria

- Age: Adolescents aged 15-19 years.
- Enrollment Status: Currently enrolled in a high school in Adama during the study period (February-March 2025).
- Consent: Written informed assent from participants to participate in the study.

4.4.2 Exclusion criteria

- Medical Conditions: Adolescents with diagnosed sleep disorders (e.g., insomnia, sleep apnea) or psychiatric conditions (e.g., severe depression) that may significantly affect sleep quality and could confound results.
- Medication Use: Those using prescription medications specifically for sleep or psychiatric conditions that could alter sleep patterns.

4.5 Sample size determination and sampling technique

4.5.1. For the first objective

To determine the sample size for this study, the single population proportion formula will be used. Given that there is no corresponding research on sleep quality among adolescents, a prevalence (P) of 50% will be assumed to account for maximum variability. The confidence level (CL) will be set at 95%, and the margin of error (d) will be 5%. The formula for calculating the sample size is:

For poor sleep quality**:**

$$n = \frac{Z\alpha_{/2}{}^{2} \; p\,(1-p)}{d^2}$$

$n = \frac{(1.96)^2\ 0.5\ (1-0.5)}{0.05^2}$ = 384 Considering the design effect the sample size multiplied by two (384x2=768). Therefore, considering 10% the final sample size is 844.

For depression:

a prevalence (P)=28%(37) of depression sleep quality among adolescents in Jimma will be assumed .The confidence level (CL) will be set at 95%, and the margin of error (d) will be 5%. The formula for calculating the sample size is:

$$n = \frac{Z\alpha_{/2}{}^{2} \; p\,(1-p)}{d^2}$$

$n = \frac{(1.96)^2\ 0.28\ (1-0.28)}{0.05^2}$ =310 considering the design effect the sample size multiplied by two (310x2=620). Therefore, considering 10% the final sample size is 682.

After calculating the sample sizes that are pertinent to the objectives the numbers are low so taking the first objective as a sample size it will be 844.

A multi-stage sampling technique will be utilized to select the study participants. To select the three Weredas for the study from the total 19 Weredas in Adama City, a Systematic Sampling method is employed. All Weredas are arranged in a logical order, and the total number of Weredas was divided by the desired number of Weredas to determine a sampling interval. A random starting point within the first interval was chosen, and subsequent Weredas were selected by adding the sampling interval to the starting point. Using this approach, the Weredas selected for the study are Berecha, Bole, and Migira.

In the second stage of sampling, stratified sampling will be employed to ensure proportional representation of private and government schools within each selected Wereda (Berecha, Bole, and Migira). The schools in each Wereda will first be divided into two categories: private and government. In the government school stratum, the schools to be considered are Boset, Goro, and Hultenga Dereja, while the private school stratum includes Jenju, Haligi, and Mekobi. From each stratum, one school will be randomly selected using a simple random sampling method.

The total number of students in the selected secondary schools of Adama City is 4,590, distributed as follows: Boset (1,255 students), Goro (1,012 students), Hultenga Dereja (1,223 students), Jenju (210 students), mekobi (568 students) and Haligi (322 students). To ensure fair representation, the total sample size of 844 is proportionally allocated to each school based on its student population. by the following formula

Sample size for a school=(Total students in all schoolsTotal students in the school)×Total sample size

As a result, the sample sizes for each school are allocated as follows: Boset (230 students), Goro (185 students), Hultenga Dereja (224 students), Jenju (39 students), Mekobi (105 students), and. Haligi (61 students).

Finally, within each selected school, students will be sampled using Simple Random Sampling (SRS). A list of all students from each grade level (Grades 9, 10, 11, and 12) will be obtained, and students will be proportionally allocated based on the total number of students in each grade. The sample size for each grade will be determined by calculating the proportion of students in that grade relative to the total school population. Random selection will then be performed using tools such as a lottery method or random number generator to ensure fairness and equal chance of participation(figure 2)

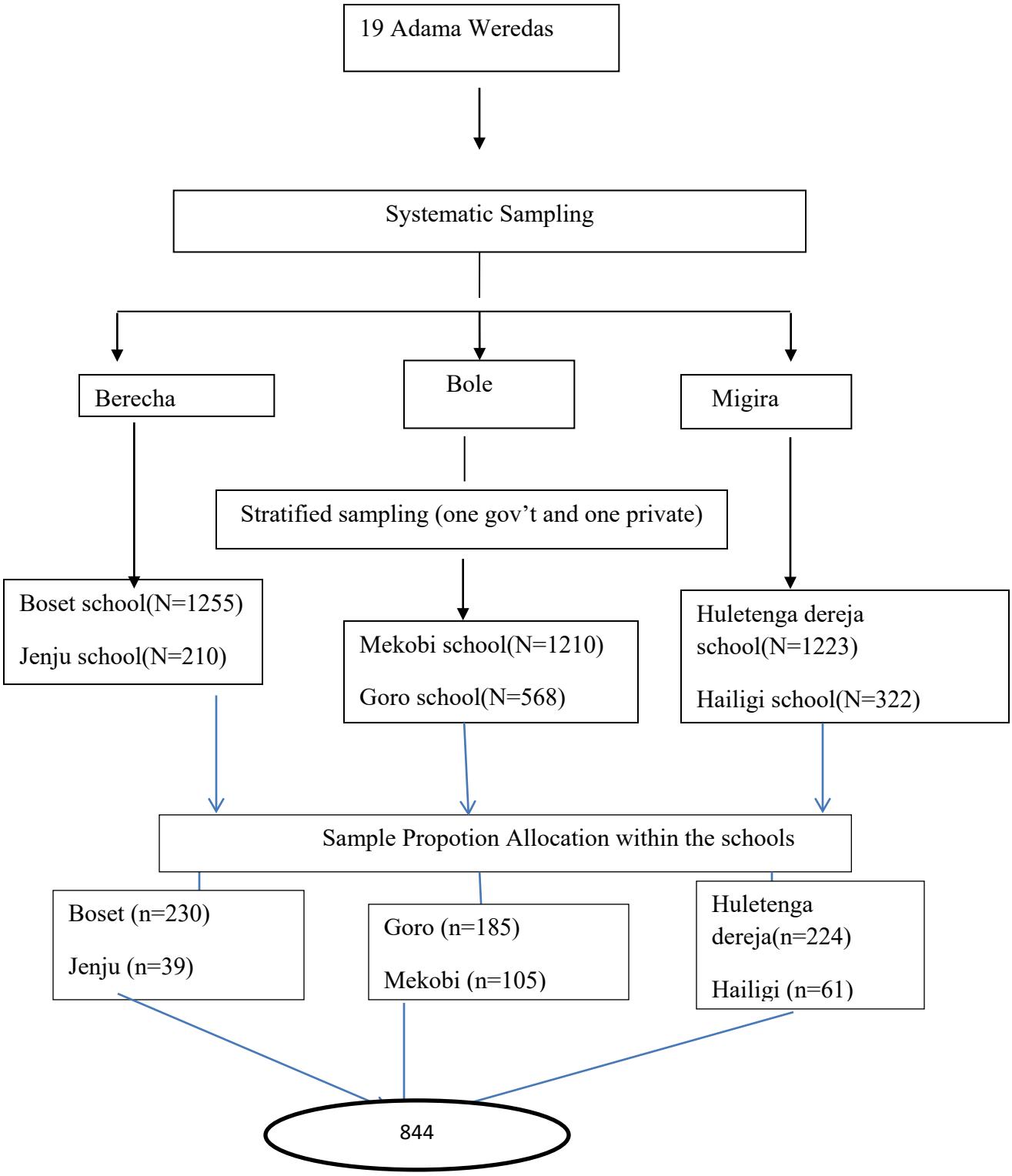

Figure 2: Schematic presentaion on Sleep Quality and Its Association with Depression among Adolescents at Secondary Schools in Adama City, Ethiopia

4.6 Study variables

Dependent variable

- Poor Sleep quality
- Depression

Independent Variable

- Socio-demographic characteristics
- Family size ,income , Living arrangment
- Substance use

4.7 Operational definitions

- **Adolescents** :defined as individuals aged 15-19 years
- **Sleep quality -** will be defined as poor if the global Pittsburgh Sleep Quality Index (PSQI) score is greater than 5 and good if the score is 5 or less.
- **Depression -** Students who respond "2" (Several days) or "3" (More than half the days) to at least 4 of the 9 questions on the Patient Health Questionnaire (PHQ-9) scale will be classified as having a depressive disorder. The PQ-9 severity score ranges from 0 to 27, since the 9 elements ranged from 0 (“not at all”) to 3 (“nearly every day”).
- **Sleep latency -** The amount of time it takes to fall asleep after going to bed.
- **Sleep efficiency -** The ratio of total sleep time to the amount of time spent in bed
- **Sleep disturbances -** The frequency of sleep interruptions due to factors like waking up during the night, having to use the bathroom, or experiencing discomfort
- **Daytime dysfunction** -The impact of poor sleep on daytime activities, such as difficulty staying awake during the day or reduced productivity.
- **Subjective sleep quality -** The participant's overall perception of their sleep quality.

4.8 Data collection tools, methods, and procedures

The data collection tool will be developed based on the findings from the systematic literature review. This review will identify key factors influencing sleep quality and depressions among adolescents.To ensure their reliability and validity, an exhaustive process is undertaken. Initially, existing instruments pertinent to the study objectives will be scrutinized, including standardized

questionnaires and validated scales utilized in similar contexts. A structured, pre-tested interviewer administered questionnaire will be developed based on validated tools, such as the Pittsburgh Sleep Quality Index (PSQI) for assessing sleep quality, Patient Health Questionnaire (PHQ-9) for depression and a set of questions designed to capture socio-demographic information and other relevant variables . These instruments underwent careful evaluation to assess their appropriateness for the study's context and target population.

The data collection process will be carried out by trained nurses with a background in health sciences. They will undergo a three-day training session on the study objectives, ethical considerations, and data quality assurance. The data will be collected using a paper-based questionnaire, which will be pretested in a pilot study to ensure clarity and reliability. The principal investigator will supervise the entire process, conducting daily reviews of the collected data for completeness and providing real-time feedback to the nurses.

The data collection process will be carried out by six trained nurses with a background in health sciences. They will undergo a three-day training session on the study objectives, ethical considerations, and data quality assurance. The data will be collected using a paper-based questionnaire, which will be pretested in a pilot study to ensure clarity and reliability. The principal investigator will supervise the entire process, conducting daily reviews of the collected data for completeness and providing real-time feedback to the nurses.

4.9 Data quality control

To ensure the quality of the data, all data collectors will undergo a three-day training before the commencement of data collection. The data collectors will undergo rigorous training on the study objectives, questionnaire administration techniques, and ethical considerations. Prior to data collection, the data collectors will also participate in a comprehensive training covering the study protocol, informed consent procedures, confidentiality requirements, and techniques for ensuring data quality.

Before the actual data collection, a pilot test will be carried out at different area to ensure that questions are clear and understandable and for possible correction. The respondents who

participated in the pilot test will not be included in the actual data collection to avoid contamination of information. Throughout the data collection process, the principal investigator will conduct daily reviews of the collected questionnaires to ensure completeness and clarity. Feedback will be promptly communicated to the data collectors for necessary adjustments. Data will then be coded, entered into a computer, cleaned and frequency checked for outliers and missing values before analysis.

4.10 Data processing and analysis

All questionnaires will be checked for completeness and consistency before data entry. Data will be entered into Epi Data version 3.5.3 using a double-entry method to ensure accuracy. After entry, the data will be cleaned by removing duplicates, addressing inconsistencies, and managing missing values using appropriate methods. Outliers will be identified using boxplots and scatterplots. The cleaned dataset will then be exported to SPSS version 26 for further analysis.

Descriptive statistics will include frequencies and percentages means and standard deviations .To assess the relationship between sleep quality and depression, Spearman's rank correlation will be used due to the ordinal nature of the variables. Bivariate ordinal logistic regression will be conducted .Subsequently, multivariate ordinal logistic regression will be performed to adjust for potential confounders. The results will be presented as Adjusted Odds Ratios (AOR) with **95%** Confidence Intervals (CI)**.** A significance level of 0.05 will be set for all analyses.

4.11 Ethical considerations

Ethical approval for this study will be obtained from the Ethical Review Committee of Addis Ababa University (AAU) and the Adama Regional Health Bureau. The data collectors will provide clear explanations about the objective and purpose of the study to the participants and their guardians, if applicable. All relevant information, including the study's scope, procedures, benefits, and potential harms, will be shared to ensure informed decision-making. Participants will be informed that the information they provide will be strictly confidential, accessible only to the principal investigator, and used solely for the purposes of this research.

To ensure privacy, data will be anonymzed during collection and securely stored to prevent unauthorized access. Respecting participants' rights is paramount; they will have the opportunity

to ask questions at any time and will be assured that their participation is entirely voluntary. Participants will not be coerced and can withdraw from the study at any stage without any negative consequences. Verbal informed consent will be obtained from all participants and their guardians where applicable, ensuring full understanding of their involvement and the study's ethical safeguards.

4.12 Expected Outcome

This study aims to provide a detailed understanding of common sleep patterns among adolescents, offering evidence-based insights into how sleep quality impacts the occurrence of depression. By identifying key factors that contribute to poor sleep quality; the research will help uncover underlying issues that hinder healthy sleep among adolescents.

Additionally, the findings will inform the development of targeted intervention strategies, such as promoting healthy sleep patterns, adjusting school schedules to better align with adolescents' natural sleep cycles, and managing screen time to reduce its negative effects on sleep. These interventions can ultimately support adolescent well-being by addressing sleep-related challenges and their potential impact on mental health.

4.13 Plan for dissemination of results

The primary aim of this thesis is to fulfill partial requirements for the Master of Public Health in of Addis Ababa College of Health sceinceschool of public health**.** Consequently, the study results will be submitted to the Department of School of Public Health, at AAU. Additionally, copies of the findings will be shared with the participating schools and relevant organizations. Furthermore, the findings will be disseminated through presentations at professional, local, national, and international conferences, and efforts will be made to publish the results in peer-reviewed journals, both at the national and international.

5. Work plan and budget

5.1 Work Plan

Table 1**: A work plan used to asses Sleep Quality and Its Association with Depression among Adolescents at Secondary Schools in Adama City, Ethiopia**

S. N	Activities	Timeline							
		Aug-Dec 2024	Dec 2024	Feb - March 2025	April 2025	May 2025	June-July 2025	Aug 2025	Sep 2025
1.	Proposal development and defense	■							
2.	Ethical Review		■						
3.	Data collector Training, Pre-testing		■	■					
4.	Data Collection			■					
5.	Data Entry and Management			■	■				
6.	Data Analysis				■	■			
7.	Draft Thesis					■	■		
8.	Final Thesis						■		
9.	Defense							■	
10.	Finalizing Thesis								■
11.	Dissemination of Result				■	■	■	■	■

5.2 Budget breakdown

Table 2: Budgets required for conducting the study on Sleep Quality and Its Association with Depression among Adolescents at Secondary Schools in Adama City, Ethiopia

S. N	Expenses	Measurement in Units/No.	Unit Price (ETB)	Total (ETB)
1.	Stationary (notebook, pen, marker)			1,000
2.	Mobile Card expenses	20pcs.	100*20	2,000
3.	Printing and binding draft proposal	3 copies (40 pages)	120*10	1,200
4.	Printing and binding the final proposal	3 copies (40 pages)	120*10	1,200
5.	Data enumerator's payment	8 enumerators	2000*8	16,000
6.	Printing and binding draft document	3 copies (60 pages)	180*10	1,800
7.	Printing and binding the final document	3 copies (60 pages)	180*10	1,800
8.	**Total**			**25,000**

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7. Annexes

Annex I: Information Sheet

Good morning/ afternoon. My name is Hana Serbesa. Currently I am a graduate student at Addis Ababa University, College of Health Sciences School of public health. Now I am conducting a study to asses Sleep Quality and its association with depression among adolescents at secondary schools of Adama City, Ethiopia

Objective: this study aims at identifying Sleep Quality and its association with depression among adolescents at secondary schools of Adama City, Ethiopia

Name of the organization: Addis Ababa University College of health Science School of public health

Introduction: this information sheet will be used for adolescents At Secondary Schools Of Adama City selected at Secondary Schools Of Adama City, Ethiopia The aim of the form is to make the above concerned offices clear about the purpose of research, data collection procedures and to get permission to conduct the research.

Risks: since the study will be conducted by taking information from adolescents it does not inflect any harm on the patient.

Benefits: the research have no direct benefit for the one whose document is recorded in this research. But it will have indirect benefit for others in the program. Most importantly, the result of the study will be beneficial to identify association of sleep quality and depression to implement interventions. All the information that is gotten from the students will be kept confidential and private. Only the principal investigator and interviewer will have access to the information. If there is any problem during the interview you can contact the principal investigator in the following ways of contact information

Principal investigator: Hana serebssa

Email: hanaserbesa13@gmail.com

Annex II: English Version Qouestionare

socio demographic characterstics

No	Questions	Response
1	Sex	1. Male 2. Female
2	Age	_____
3	Enrolled class	1. Grade 9 2. Grade 10 3.Grade 11 4. Grade 12
4	Enrolled school	1. Boset 2 Mekobi 3 Hultenga Dereja 4.Jenju 5.Haligi, 6. Goro
5	Family income	_____
6	Education status of fathers	1.No formal education 2.Primary school 3.Secondary and above 4.College and above 5.others_____
7	Education status of mothers	1.No formal education 2.Primary school 3.Secondary and above 4.College and above 5.others_____
8	Number of family members	_____

9	Have siblings	1.Yes 2.No
10	Living with parents	1.Both parents 2.One parent 3.With relative 4.Other_____
11	Family realtionship	1.Above average 2.Average 3.Below average
12	Parental caring	1.Satisfied with father or mother 2.Satisfied with both of them 3.Dissatisfied with both of them
13	Academic achievement	1.Above average 2.Average 3.Below average
14	Relationship with teachers	1.Good 2.Average 3.Poor
15	Relationship with freinds	1.Good 2.Average 3.Poor
16	Suicide ideation	1.Never 2.Occasionally(1–2 times/year) 3.Sometimes (3–6 times/year) 4.Often (over 6 times/year)
17	Suicide attempt	1.Never 2.Occasionally(1–2 times/year) 3.Sometimes (3–6 times/year) 4.Often (over 6 times/year)

18	Feeling lonley	1.yes 2.No
19	Is there a history of mental illness in your family?	1.Yes 2.No
20	Time spend on internet hours	_____
21	Spend time on internet(hours) before going bed	_____

Consumption of drinks and substances

No	Questions	Response
1	Do you drink Spris?	1.Yes 2.No
2	Do you drink Coffee?	1.Yes 2.No
3	Do you drink Coca cola?	1.Yes 2.No
4	Do you drink Pepsi ?	1.Yes 2.No
5	Do you use Alcohol ?	1.Yes 2.No
6	Do you use Khat ?	1.Yes 2.No
7	Do you smoke Cigarette	1.Yes 2.No
8	If there is Other substances you use specifiy	_____

sleep quality

No	Qouestions	Response
1	During this past month what time have you usually gone to bed at night?	Bed time_____
2	During this past month how long minutes has it usually taken you to fall asleep each night?	Number of minutes_____
3	During this past month what time have you usually gotten up in the morning	Getting up time _____
4	During this past month how many hours of actual sleep did you get at night ?this may be different than of hours you spent	Hours of sleep per night_____
5	During the past month how often have you had trouble sleeping because you	
	a)Can not get to sleep within 30 minutes	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
	b)Wake in the middle of the night or early in the morning	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
	c)Have to get up to use the bath room	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week

	d) Can not breathe comfortably	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
	e) Cough or snore loudly	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
	F)Feel to cold	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
	g) Feel to hot	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
	h)Have bad dreams	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
	i)Have pain	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
	j)Other resaons please describe _____ _____ How often during this past month have you had sleeping trouble because of this	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week

6	During this past month how would you rate your sleep over all	1.Very Good 2. Fairly Good 3. Fairly Bad 4.Very Bad
7	During this past month how often have you taken medicine to help you sleep (prescribed over the counter)	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
8	During this past month how often have you had trouble staying awake while driving ,eating meals and engaging in social activity ?	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
9	During this past month how much of a problem has it been for you to keep the enthusiasem to get things done ?	1. No problem at all 2. Only a very slight problem 3. Some what of a problem 4. A very big problem
10	Do you have a bed partner or a room mate	1. No bed partner or a room mate 2. Bed partner or a room mate in the other room 3. A room mate in the same room 4. Partner in the same bed
11	If you have a bed partner or a room mate ask him if you have had	

	A)loud snoring	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
	B)long pauses between the breathe of the sleep	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week
	c)legs twicihing and jerking at sleep	1. not during this past month 2. less than a week 3 once ortwice a week 4. three or times a week
	d)Disorentiation and confusion during the sleep	1. not during this past month 2. less than a week 3 once ortwice a week 4. three or times a week
	e)Other restlesness while you sleep please describe _____	1. Not during this past month 2. Less than a week 3. Once or twice a week 4. Three or times a week

III: DEPRESSION

No	Questions	Not at all	Several days	More than half of the days	Nearly every day
1	Little interest or pleasure in doing things				
2	Feeling down ,depressed, or hopeless				
3	Trouble falling or staying a sleep or sleeping too much				
4	Feeling tired or having little energy				
5	Poor appetite or over eating				
6	Feeling bad about your self or that you are a failure or have let your family down				
7	Trouble on concentrating on things such as reading a news paper or watching television				
8	Moving or speaking slowly that other people could have noticed or the opposite being so fidgety or restless that you have been moving around a lot more than usual				
9	Thoughts that you would better of dead or of hurting yourself				

Annex III: Parental Assent form

Title of the Study: Sleep Quality and Its Association with Depression Among Adolescents at Secondary Schools in Adama City, Ethiopia

Introduction: I am conducting a research study to identify the relationship between sleep quality and depression among adolescents attending secondary schools in Adama City, Ethiopia.

objective : This study aims to better understand how sleep patterns may affect the mental health of adolescents in our community.

Procedures: Your child will be asked to complete a questionnaire that will assess their sleep patterns, mental health, and related factors. This questionnaire will take approximately 20-30 minutes to complete. The information gathered will be kept confidential and will only be used for the purpose of this study.

Risks and Benefits: By participating, your child may help us understand important factors that influence adolescent mental health, which could lead to better support and resources for students.

Confidentiality: All information provided by your child will be kept confidential. Their name or any identifying information will not be used in any reports or publications resulting from this study. Data will be stored securely and only the research team will have access to it.

Voluntary Participation: Participation in this study is entirely voluntary. Your child is free to decide whether or not to participate. If you or your child choose not to participate or decide to withdraw from the study at any point it is possible

Contact Information:

If you have any questions or concerns about this study, please feel free to contact the principal investigator at Email :hanaserbesa13@gmail.com phone number : 0987128702

Assent Statement:

By signing below, you are indicating that you have read and understood the information provided in this form, and you give permission for your child to participate in this study.

Parent/Guardian Name: _____

Signature:_____

Date: _____

Child's Name: _____

Annex IV: Foormii Odeeffannoo

Maqaan koo Hana Serbesa jedhamaa. Amma barataa digirii lammaffaa ta'ee, Yunivarsiitii Addis Ababa Kolleejjii Saayinsii Fayyaa, Mana Barumsaa Fayyaa Hawaasaa keessatti barachaa jira. Amma qorannoo tokko geggeessaa jira kan bu'aa qulqullina halkan fi walitti hidhata isaa hafuura dhukkubbii giddu-galeessaa barattoota mana barumsaa lammaffaa magaalaa Adamaatti, Itoophiyaa irratti.

Kaayyoo: Qorannoon kun bu'aa qulqullina halkan fi walitti hidhata isaa hafuura dhukkubbii barattoota mana barumsaa lammaffaa magaalaa Adamaatti, Itoophiyaa irratti adda baasuuf.

Maqaa Dhaabbataa: Yunivarsiitii Addis Ababa Kolleejjii Saayinsii Fayyaa, Mana Barumsaa Fayyaa Hawaasaa

Seensa: Warri qorannoo kana keessatti hirmaatan kun galmee odeeffannoo fayyadamuuf barattoota mana barumsaa magaalaa Adamaatti filataman waliin hojjetu. Kaayyoon galmee kanaa waa'ee qorannoo, karaa odeeffannoo guuruu fi eeyyama qorannoo geggeessuu hubachiisuu dha.

Balaa: Qorannoon kun odeeffannoo barattoota irraa guuruun kan geggeeffamu waan ta'eef, balaa tokkollee hin qaqqabsiisu.

Fayda: Qorannoon kun faayidaa tokkollee hin qabu kan namni galmee isaa galchuu keessatti argatu. Haa ta’u malee, qorannoon kun faayidaa doloolaa namoota biroo kan akka qabsoo baratootaa fi walitti dhufeenya qulqullina halkan fi hafuura dhukkubbii agarsiisuuf bu'a qabeessa ta'a. Odeeffannoo barattootaa kan guuramu kamiyyuu sirriitti eegamuufi dhuunfaatti tursiifama. Kanneen qorannoo keessatti hirmaatan fi qoratanii odeeffannoo guuran qofa akka argatan mirkaneeffama. Yoo rakkoo tokko illee ta’e, qoratichi karaa armaan gadiitiin si waliin qunnamu ni danda'a:

Qorataa Gurguddaa.**: Hana serebssa**

Email: hanaserbesa13@gmail.com

Annex V: Gaaffii (Afaan Oromo)

Haala Qabeenya Sociyo-Demografika

Lakk	**Gaaffii**	**Filannoo Deebii**
1	Saalaa	1.Dhiira 2. Dubartii
2	Umrii	_____
3	Kutta Barnootaa	1. Kutta 9 2. Kutta 10 3. Kutta11 4. Kutta12
4	Mana Barumsaa Galmaa'e	1. Boset 2 Mekobi 3 Hultenga Dereja 4.Jenju 5.Haligi, 6. Goro
5	Galii maatii	_____
6	Haala barnoota abbootii	1.Barnoota idilee hin qabu 2.Mana barumsaa sadarkaa tokkoffaa 3.Lammaffaa fi isaa ol 4.Kolleejjii fi isaa ol 5.kanneen biroo_____.
7	Haala barnoota haadholii	1.Barnoota idilee hin qabu 2.Mana barumsaa sadarkaa tokkoffaa 3.Lammaffaa fi isaa ol 4.Kolleejjii fi isaa ol 5.kanneen biroo_____.

8	Baay’ina miseensota maatii	_____
9	Obbolaa qabaachuu	1.Eeyyee 2.lakkii
10	Warra waliin jiraachuu	1.Warra lamaan 2.Warra tokko 3.Fira waliin 4.Kanneen biroo_____ .
11	Hariiroo wajjin maatii	1.Giddugaleessaaol 2.Giddugaleessa 3.Giddugaleessaa gadi
12	Kunuunsa warraa	1.Abbaa ykn haadhatti quufuu 2.Lamaan isaaniitti quufuu 3.Lamaan isaaniitti quufa dhabuu
13	Ga’umsa barnootaa	1.Giddugaleessaa ol 2.Giddugaleessa 3.Giddugaleessaa gadi
14	Walitti dhufeenya barsiisota waliin	1.Gaarii 2.Giddugaleessa 3.badduu
`15	Hariiroo hiriyaaa waliin qaban	1.Gaarii 2.Giddugaleessa 3.badduu
16	Yaada of ajjeesuu	1.Tasumaa 2.Darbee darbee(yeroo 1–2/waggaa) . 3.Yeroo tokko tokko (yeroo 3–6/waggaa) . 4.Yeroo baay'ee (yeroo 6 ol/waggaa) .
17	Yaalii of ajjeesuu	1.Tasumaa 2.Darbee darbee(yeroo 1–2/waggaa) . 3.Yeroo tokko tokko (yeroo 3–6/waggaa)

		. 4.Yeroo baay'ee (yeroo 6 ol/waggaa) .
18	kophummaa miira	1.Ey'ee 2.lakkii
19	Seenaan dhukkuba sammuu maatii keessan keessa jiraa?	1.Eeyyee 2.lakkii
20	Yeroo sa'aatii interneetii irratti dabarsan	_____
21	Osoo hin ciisin dura yeroo interneetii(sa'aatii) dabarsuu	_____

Dhugaatii fi wantoota fayyadamuu

Lakk	**Gaaffii**	**Filannoo Deebii**
1	Spris ni dhugduu?	1.Eeyyee 2.lakkii
2	Buna ni dhugduu?	1.Eeyyee 2.lakkii
3	Kookaa koolaa ni dhugduu?	1.Eeyyee 2.lakkii
4	Pepsi ni dhugduu ?	1.Eeyyee 2.lakkii
5	Alkoolii ni fayyadamtaa ?	1.Eeyyee 2.lakkii
6	Khat fayyadamtaa ?	1.Eeyyee 2.lakkii
7	Sigaaraa ni xuuxuu ?	1.Eeyyee 2.lakkii
8	Wantoonni biroo fayyadamtan yoo jiraatan	_____ .

Qulqullina Hiriba

Lakk	Gaaffii	**Filannoo Deebii**
1	Ji'a darbe keessatti, sa'a kamitti hirriba ciistaa?	Sa'a ciiftu _____
2	Ji'a darbe keessatti, daqiiqaa meeqa har'a gaafa ciiftu?	Lakkoofsa daqiiqaa _____
3	Ji'a darbe keessatti, sa'a kamitti irriba kee irra kataa?	Sa'a muka argamtuu _____
4	Ji'a darbe keessatti, sa'atii meeqa hirriba haqamuu qabda?	Sa'atii hirriba darbe _____
5	Ji'a darbe keessatti, rakkoo hirriba qabda ta'anii fi sababoota itti aanu keessatti rakkoo yeroo heddu qabaachuu dandeessa	1. Ji'a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi ykn
	a) Yeroo daqiiqaa 30 keessatti rafuu hin dandeenye	1. Ji'a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi ykn caalaa
	b) Halkan keessaa yookaan ganama erga ka'ee booda deebi'ee rafuu	1. Ji'a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi
	c) Mana fincaanii fayyadamuu yeroo baay'ee galu	1. Ji'a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi
	d) Hojii baay'ee irratti hin hafu	1. Ji'a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama

		4. Torbaan tokkoon sadi
	e) Dhiphina hafuuraa qabaachuu	1. Ji’a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi
	f) Dhukkubbii fi sodaachisummaa	1. Ji’a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi
	g) Ho'aan dhiibbaa keessa jiraachuu	1. Ji’a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi
	h) Qabbanaa'uu dhiibbaa	1. Ji’a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi
	I?Boruukoo hamaa qabaachuu	2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi
	jSababoota biroo, maal akka ta'e ibsi	
6	Ji’a darbe keessatti, qulqullina hirriba kee akkaataa maalirratti siif ta’ee hirmaata?	1. Gaarii dha 2. Garaagarummaa qabdu 3. Xinnaa dha 4. Cinaa badaa

7	Ji’a darbe keessatti, dhukkubbii hirkisuudhaan hirriba qabaachuu dandeessu?	1. Ji’a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi ykn caalaa
8	Ji’a darbe keessatti, rakkoo ykn kufaatii maashaa qabaachuu fi yeroo nyaataa fi hojiilee hawaasa irratti xiyyeeffachuu dandeessu?	1. Ji’a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi ykn caalaa
9	Ji’a darbe keessatti, rakkoo wanta keessaa hojii hojjachuu qabdu akka siif ta’ee hirmaata?	1. Rakkoo hin qabdu 2. Rakkoo xiqqaa qaba 3. Rakkoo muraasa qaba 4. Rakkoo guddaa qaba
10	Namaa ciisanii yookin ofii kee waliin akka armaan gadii qabaachuu qabda?	1Namni hin qabu ykn waliin ciisu hin jiru 2 Namni ciisuu yookin waliin ciisu mana biraa jira 3Namni waliin ciisu mana tokko keessatti 4 Nama waliin ciisu bakka tokkotti
	Qarqara dhaga'uu	1.Ji’a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama 4. Torbaan tokkoon sadi ykn caalaa
	Uummata hafuura dheeraa gidduu hafuura hir'ina keessa	1.Ji’a darbe keessa hin turre 2. Torbaan tokko caalaa 3. Torbaan tokkoon lama

		4. Torbaan tokkoon sadi ykn caalaa
`11	Uummata hafuura dheeraa gidduu hafuura hir'ina keessa	1.Ji'a darbe keessa hin turre 2.Torbaan tokko caalaa 3.Torbaan tokkoon lama 4.Torbaan tokkoon sadi ykn caalaa
	Wal-qunnamtii fi gowwummaa yeroo rafuu	1.Ji'a darbe keessa hin turre 2.Torbaan tokko caalaa 3.Torbaan tokkoon lama 4.Torbaan tokkoon sadi ykn caalaa
12	Rakkoo bifa biraa yeroo rafuu, akkaataa ittiin raawwatu barreessi	1.Ji'a darbe keessa hin turre 2.Torbaan tokko caalaa 3.Torbaan tokkoon lama 4.Torbaan tokkoon sadi ykn caalaa

III: QO'ANNAA GADDUU

Lakk	Gaaffii	Hin jiruu	Guyyoota muraasa	Guyyoota hunda caalaa	Guyyoota hunda dhaqqabu
1	Jalqaba xiqqoo fi gammachuu hojjachuu dhabu				
2	Wanta hin jaalanne, gaddisiisuu, yookaan gammachuu dhabuu				
3	Rafuuf rakkoo qabaachuu ykn yeroo dheeraa rafuu				
4	Dadhabina fi humna gadi fageenyi qabaachuu				

5	nyaata xiqqoo ykn nyaata guddaa fudhachuu				
6	Ofii kee miidhuu, yookaan kufaatii fi maatii kee gaddisiisuu				
7	Rakkina yaadachuu akkasumas dubbisuu ykn TV ilaaluu irratti xiyyeeffannaa dhabuu				
8	Harka yookiin dubbachuuf daandii isaa bakka caalaatti gaddisiisuu yookaan baay'inaan deemu fi dhaga'amee hojjechuu				
9	Yaada ittiin ofii kee du'uuf fi of miidhuu gochuu				

Annex VI: Foormii Galmeen Maatii

Maqaa Qorannoo: Qulqullina Hiriba Walitti Dhufeenya Isaa fi Hidhata Dhiphina Garaagaraa Barattoota Mana Barumsaa Adamaa, Itoophiyaa

Seensa: Qorannoon kun qindaa'ee jiraa barattoota mana barumsaa Adamaa keessatti qulqullina hilloofi walitti dhufeenya isaa fi dhiibbaa sammuu isaanii adda baasuuf.

Kaayyoo: Qorannoon kun, haala hilloofi dhiibbaa sammuu barattoota keenya irratti dhiibbaa qabaachuu fi hojiiwwan tokko tokko waliin walqabatee akka hubatamuuf yaada.

Tartiiba: Ilmi kee gaafiiwwan yeroo hilloofi dhiibbaa sammuu isaa waliin walqabatan deebisuuf akka dhiheessuu ni barbaadama. Gaafiiwwan kun yeroo 20-30 daqiiqaa fudhata. Odeeffannoo argame sirnaan eegamaa fi qorannoo kanaaf qofa tajaajiluuf qofa akka itti fayyadamnu ni mirkaneeffama.

Hamaafi Fayyadamummaa: Hirmaachuun isaaniitiin, ilmi keeti akka hubannaa dhabamsiisuu fi kaka'umsa sammuu dargaggootaa irratti qoratamnee gargaarsaaf deeggarsa argamsiisuu nu gargaara.

Eegumsa Odeeffannoo: Odeeffannoo ilmi keeti kennu hundi eegumsa cimaadhaan jiraata. Maqaa isaanii ykn odeeffannoo adda baasuuf itti fayyadaman qorannoowwan ykn gabaasaalee baafamu keessatti hin argamu. Odeeffannoo kun sirnaan kuufamaafi gareen qorannoon qofa irraa fayyadama.

Hirmaannaa Waliigalaa: Hirmaachuun qorannoo kanaa sagantaa hunda dura fedhii ilmi keetiin yoo ta'ee qofaadha. Hirmaachuun ykn hirmaachuu dhiisuu ykn gara fuula duraatti hirmaachuuf murteessuu, bakka hunda waan danda'amuudha.

Walqunnamtii: Gaaffiiwwan ykn hubannoo qabaachuu yoo barbaadde, ogeessa qorannoo waliin walqunnamtii gochuu ni dandeessa:

Ogeessa Qorannoo: Hana Serbesa
Imeeilii: hanaserbesa13@gmail.com
Lakkoofsa Bilbilaa: 0987128702

Waliigaltee Maatii: Foomii armaan gadii mallatteessuun, odeeffannoo kenneef akka hubattanii fi hubatanii ilmi keeti qorannoo kana keessatti hirmaachuu akka mirkaneessan beeksisaa.

Maqaa Maatii/Abbaa fi Haadha: _____

Mallattoo: _____

Guyyaa: _____

Maqaa Ilma Keeti: _____

Annex VII: Amharic Information Sheet

እንደምን አደሩ/ ዋሉ ሀና ሰርቤሳ እባላለሁ። በአሁኑ ጊዜ በአዲስ አበባ ዩኒቨርሲቲ የጤና ሳይንስ ኮሌጅ የህዝብ ጤና ትምህርት ቤት ተመራቂ ተማሪ ነኝ። አሁን በአዳማ ከተማ፣ ኢትዮጵያ ሁለተኛ ደረጃ ትምህርት ቤቶች የእንቅልፍ ጥራት እና በጉርምስና ዕድሜ ላይ ከሚገኙ ወጣቶች ጋር ያለውን ግንኙነት ለመገምገም ጥናት እያካሄድኩ ነው።

ዓላማ፡- ይህ ጥናት በአዳማ ከተማ፣ ኢትዮጵያ ሁለተኛ ደረጃ ትምህርት ቤቶች በታዳጊ ወጣቶች መካከል የእንቅልፍ ጥራት እና ከጭንቀት ጋር ያለውን ግንኙነት ለመለየት ያለመ ነው።

የድርጅቱ ስም፡- የአዲስ አበባ ዩኒቨርሲቲ የጤና ሳይንስ ኮሌጅ የህዝብ ጤና ትምህርት ቤት

መግቢያ፡ ይህ የመረጃ ወረቀት በአዳማ ከተማ፣ ኢትዮጵያ 2ኛ ደረጃ ትምህርት ቤቶች ለተመረጡ ታዳጊዎች ይውላል። የቅጹ ዓላማ ከላይ የተጠቀሱትን ጽ/ቤቶች ስለ የምርምር ዓላማ፣ የመረጃ አሰባሰብ ሥነ-ሥርዓት እና ምርምር ለማድረግ ፈቃድ ለማግኘት ነው።

ስጋቶች፡ ጥናቱ የሚካሄደው በጉርምስና ዕድሜ ላይ የሚገኙ ወጣቶችን መረጃ በመውሰድ ስለሆነ ምንም አይነት ጉዳት አያስከትልም።

ጥቅሞች፡ ጥናቱ በዚህ ጥናት ውስጥ ሰነዱ ለተመዘገበው ሰው ቀጥተኛ ጥቅም የለውም። ነገር ግን በፕሮግራሙ ውስጥ ለሌሎች ቀጥተኛ ያልሆነ ጥቅም ይኖረዋል. ከሁሉም በላይ የጥናቱ ውጤት የእንቅልፍ ጥራትን እና የመንፈስ ጭንቀትን ጣልቃገብነትን ለመተግበር ጠቃሚ ይሆናል:: ከተማሪዎቹ የተገኘ መረጃ ሁሉ ሚስጥራዊ እና ሚስጥራዊ ይሆናል። ዋናው መርማሪ እና ቃለ መጠይቅ አድራጊ ብቻ ነው መረጃውን ማግኘት የሚችሉት። በቃለ መጠይቁ ወቅት ምንም አይነት ችግር ካለ ዋናውን መርማሪ በሚከተሉት የመገናኛ መረጃ መንገዶች ማግኘት ይችላሉ።

ዋና መርማሪ፡ ሃና ሴርቤሳ

ኢሜል፡ hanaserbesa13@gmail.com

Annex VIII:Amharic Version Qouestionare

ክፍል 1: ስነ-ሕዝብ ገጸ-ባህሪያት

ቁጥር	ጥያቄ	ምላሽ
1	ፆታ	1. ወንድ 2. ሴት
2	ዕድሜ	_____
3	ክፍል	1. 9ኛ ክፍል 2. 10ኛ ክፍል 3. 11ኛ ክፍል 4. 12ኛ ክፍል
4	ትምህርት ቤት	1. ቦሴት 2 መቆቢ 3 ሁለተኛ ደረጃ 4.ጀንጁ 5. ሃሊጊ 6. ጎሮ
5	የቤተሰብ ገቢ	_____
6	የአባት የትምህርት ደረጃ	1. መደበኛ ትምህርት የለም 2. የመጀመሪያ ደረጃ ትምህርት ቤት 3.ሁለተኛ እና ከዚያ በላይ 4.ኮሌጅ እና ከዚያ በላይ 5.ሌሎች _____
7	የእናት የትምህርት ደረጃ	1. መደበኛ ትምህርት የለም 2. የመጀመሪያ ደረጃ ትምህርት ቤት 3.ሁለተኛ እና ከዚያ በላይ 4.ኮሌጅ እና ከዚያ በላይ 5.ሌሎች _____
8	የቤተሰብ አባላት ብዛት	_____
9	ወንድሞችና እህቶች አላቸው	1. አዎ 2. አይ
10	ከወላጅ ጋር	1. ሁለቱም ወላጆች

		2.አንድ ወላጅ 3.ከዘመድ ጋር 4.ሌላ_____
11	የቤተሰብ ግንኙነት	1. ከአማካይ በላይ 2.አማካይ 3.ከአማካይ በታች
12	የወላጅ እንክብካቤ	1. በአባት ወይም በእናት እርካታ አለ 2.በሁለቱም ረክቻለሁ 3.በሁለቱም አልረካም
13	የትምህርት ስኬት	1.ከአማካይ በላይ 2.አማካይ 3.ከአማካይ በታች
14	ከመምህራን ጋር ያለው ግንኙነት	1.ጥሩ 2.አማካይ 3. መጥፎ
15	ከጓደኛ ጋር ያለው ግንኙነት	1.ጥሩ 2.አማካይ 3. መጥፎ
16	ራስን የማጥፋት ሐሳብ	1. በጭራሽ 2. አልፎ አልፎ (1-2 ጊዜ በዓመት) 3. አንዳንድ ጊዜ (3-6 ጊዜ በዓመት) 4. ብዙ ጊዜ (ከ 6 ጊዜ በላይ በዓመት)
17	ራስን የማጥፋት ሙከራ	1. በጭራሽ 2. አልፎ አልፎ (1-2 ጊዜ በዓመት) 3. አንዳንድ ጊዜ (3-6 ጊዜ በዓመት) 4. ብዙ ጊዜ (ከ 6 ጊዜ በላይ በዓመት)
18	የብቸኝነት ስሜት	1. አዎ 2.አይ
19	በቤተሰባችሁ ውስጥ የአእምሮ ህመም ታሪክ አለ?	1. አዎ 2.አይ
20	በበይነ መረብ ላይ የሚጠፋው ጊዜ	_____

21	ወደ መኝታ ከመሄድ በፊት በይነመረብ (ሰዓታት) ላይ የሚጠፋውጊዜ	_____

ቁጥር	ጥያቄ	ምላሽ
1	ስፕሪስ ትጠጣለህ/ጫለሽ?	1. አዎ 2.አይ
2	ቡና ትጠጣለህ/ጫለሽ?	1. አዎ 2.አይ
3	ኮካ ኮላ ትጠጣለህ/ጫለሽ?	1. አዎ 2.አይ
4	ፔፕሲ ትጠጣለህ/ጫለሽ?	1. አዎ 2.አይ
5	አልኮል ትጠቀማለህ/ሚያለሽ?	1. አዎ 2.አይ
6	ጫት ትጠቀማለህ/ሚያለሽ?	1. አዎ 2.አይ
7	ሲጋራ ታጨሳለህ/ለሽ ?	1. አዎ 2.አይ
8	እርስዎ የሚጠቀሙባቸው ሌሎች ንጥረ ነገሮች ካሉ ይግለጹ ?	_____

የእንቅልፍ ጥራት

ቁጥር	ጥያቄ	ምላሽ
1	ባለፈው ወር ውስጥ አብዛኛውን ጊዜ በምሽት ለመተኛት የሄዱት ስንት ሰዓት ነው?	የመኝታ ጊዜ _____
2	ባለፈው ወር ውስጥ በእያንዳንዱ ሌሊት ለመተኛት ምን ያህል ደቂቃዎች ፈጅቶብዎታል?	የደቂቃዎች ብዛት _____
3	ባለፈው ወር ብዙ ጊዜ በጠዋት የሚነሱት ስንት ሰአት ነው ?	የመነሳት ሰአት _____
4	ባለፈው ወር ስንት ሰአታት ትክክለኛ እንቅልፍ በሌሊት አገኛችሁት ?ይህ ምናልባት ካሳለፉት ሰአታት የተለየ ሊሆን ይችላል	የመኝታ ሰአት _____

5	ባለፈው ወር ምን ያህል ጊዜ በእንቅልፍዎ ምክንያት ተቸግረው ነበር?	
	ሀ) በ 30 ደቂቃ ውስጥ መተኛት አልቻልም?	1. ባለፈው ወር ውስጥ አይደለም 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሦስት ጊዜ
	ለ) በእኩለ ሌሊት ወይም በማለዳ መነሳት አለ?	1. ባለፈው ወር ውስጥ አይደለም 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሦስት ጊዜ
	ሐ) የመታጠቢያ ክፍልን ለመጠቀም መነሳት አለ	1. ባለፈው ወር ውስጥ አይደለም 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሦስት ጊዜ
	መ) በምኞት መተንፈስ አለመቻል አለ?	1. ባለፈው ወር ውስጥ አይደለም 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሦስት ጊዜ
	ሠ) ጮክ ብሎ ማሳል ወይም ማኩረፍ አለ?	1. ባለፈው ወር ውስጥ አይደለም 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሦስት ጊዜ
	ረ) የመቀዝቀዝ ስሜት አለ?	1. ባለፈው ወር ውስጥ አይደለም 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሦስት ጊዜ
	ሰ) የሙቀት ስሜት አለ?	1. ባለፈው ወር ውስጥ አይደለም 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሦስት ጊዜ

	ሸ) መጥፎ ህልም አለ?	1. ባለፈው ወር ውስጥ አይደለም 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሦስት ጊዜ
	ህመም አለ?	1. ባለፈው ወር ውስጥ አይደለም 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሦስት ጊዜ
	ሌሎች ምክንያቶች እባክዎን ይግለጹ በዚህ ባለፈው ወር ምን ያህል ጊዜ የእንቅልፍ ችግር አጋጥሞዎታል በዚህ ምክንያት?_____	1. ባለፈው ወር ውስጥ አይደለም 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሦስት ጊዜ
	በዚህ ባለፈው ወር ውስጥ እንቅልፍዎን እንዴት ይመዝኑታል?	1. በጣም ጥሩ 2. ፍትሃዊ ጥሩ 3. ፍትሃዊ መጥፎ 4. በጣም መጥፎ
6	በዚህ ወር ውስጥ ምን ያህል ጊዜ ለመተኛት የሚረዳዎትን መድሃኒት ወስደዋል (በፋርማሲው የታዘዘ	1. ባለፈው ወር ውስጥ አይደለም. 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሶስት ጊዜ
7	ባለፈው ወር ውስጥ ምን ያህል ጊዜ በመኪና መንዳት፣ምግብ በመመገብ እና በማህበራዊ እንቅስቃሴዎች ላይ በመሰማራት ላይ ነቅቶ የመቆየት ችግር አጋጥሞዎታል?	1. ባለፈው ወር ውስጥ አይደለም. 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሶስት ጊዜ
8	በዚህ ባለፈው ወር ውስጥ ነገሮችን ለማከናወን ያለውን ጉጉት ለመጠበቅ ምን ያህል ችግር ነበር?	1. ምንም ችግር የለም 2. በጣም ትንሽ ችግር ብቻ 3. አንዳንድ ችግር ብቻ 4. በጣም ትልቅ ችግር
9	የአልጋ አጋር ወይም የክፍል ጓደኛ አልዎት ?	1. የአልጋ አጋር ወይም የክፍል ጓደኛ የለም። 2. በሌላኛው ክፍል ውስጥ የአልጋ አጋር ወይም የክፍል ጓደኛ 3. በተመሳሳይ ክፍል ውስጥ የክፍል ጓደኛ

		4. ተመሳሳይ የአልጋ አጋር
10	የአልጋ አጋር ወይም አብሮት የሚኖር ሰው ካለህ ጠይቀው	
	ሀ) ፍክ ብሎ ማንኮራፋት	1. ባለፈው ወር ውስጥ አይደለም. 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሶስት ጊዜ
	ለ) በእንቅልፍ እስትንፋስ መካከል ረጅም ቆም አለ ?	1. ባለፈው ወር ውስጥ አይደለም. 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሶስት ጊዜ
	ሐ) በእንቅልፍ ጊዜ እግሮች መንቀጥቀጥ እና መወዛወዝ	1. ባለፈው ወር ውስጥ አይደለም. 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሶስት ጊዜ
	መ) በእንቅልፍ ወቅት አለመስማማት እና ግራ መጋባት	1. ባለፈው ወር ውስጥ አይደለም. 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሶስት ጊዜ
	ሠ) በምትተኛበት ጊዜ ሌላ እረፍት እባክህን ግለጽ _____	1. ባለፈው ወር ውስጥ አይደለም. 2. ከአንድ ሳምንት ያነሰ 3. በሳምንት አንድ ጊዜ ወይም ሁለት ጊዜ 4. በሳምንት ሶስት ጊዜ

ድብርት

ቁጥር	ጥያቄዎች	በጭራሽ አይደሉም	ብዙ ቀናት	ከቀናቶች ከግማሽ በላይ	በየቀኑ ማለት ይቻላል

1	ነገሮችን ለመስራት ትንሽ ፍላጎት ወይም ደስታ				
2	የመንፈስ ጭንቀት፣ ድብርት ወይም የተስፋ መቁረጥ ስሜት				
3	የመተኛት ወይም የመተኛት ችግር ወይም ብዙ መተኛት				
4	የድካም ስሜት ወይም ትንሽ ጉልበት				
5	ደካማ የምግብ ፍላጎት ወይም ከመጠን በላይ መብላት				
6	ስለ ራስህ መጥፎ ስሜት ወይም አንተ እንዳልተሳካህ ወይም ቤተሰብህን እንዳሳዘነክ ይሰማሃል				
7	እንደ ዜና ማንበብ ወይም ቴሌቪዥን በመመልከት ላይ በማተኮር ላይ ችግር				
8	ምንም ጥያቄዎች በጭራሽ አይደሉም ብዙ ቀናት ከቀናቶች ከግማሽ በላይ በየቀኑ ማለት ይቻላል				
9	ብትሞት ይሻላል ወይም እራስህን ብትንዳ ይሻልሃል የሚል አስተሳሰብ				

Annex IX: Amharic version assent form

የወላጅ ስምምነት ቅጽ የጥናቱ ርዕስ፡- የእንቅልፍ ጥራት እና ከጭንቀት ጋር ያለው ትስስር በአዳማ ከተማ 2ኛ ደረጃ ትምህርት ቤቶች ታዳጊ ወጣቶች

መግቢያ፡ በኢትዮጵያ አዳማ ከተማ የሁለተኛ ደረጃ ትምህርት ቤት በሚማሩ ታዳጊ ወጣቶች መካከል በእንቅልፍ ጥራት እና በድብርት መካከል ያለውን ግንኙነት ለመለየት የምርምር ጥናት እያካሄድኩ ነው።

ዓላማ፡- ይህ ጥናት በማህበረሰባችን ውስጥ በእንቅልፍ ጊዜ እንዴት በጉርምስና ዕድሜ ላይ የሚገኙ ወጣቶችን አእምሯዊ ጤንነት እንደሚጎዳ በተሻለ ለመረዳት ያለመ ነው።

ሂደቶች፡ ልጅዎ የእንቅልፍ ሁኔታቸውን፣ የአዕምሮ ጤናቸውን እና ተዛማጅ ሁኔታዎችን የሚገመግም መጠይቅ እንዲሞሉ ይጠየቃሉ። ይህ መጠይቅ ለማጠናቀቅ ከ20-30 ደቂቃዎች ያህል ይወስዳል። የተሰበሰበው መረጃ በሚስጥር ይጠበቃል እና ለዚህ ጥናት ዓላማ ብቻ ጥቅም ላይ ይውላል።

ስጋቶች እና ጥቅማ ጥቅሞች፡ በመሳተፍ፣ ልጅዎ በጉርምስና ዕድሜ ላይ የሚገኙ ወጣቶችን የአእምሮ ጤና ላይ ተጽእኖ የሚያሳድሩትን አስፈላጊ ነገሮች እንድንረዳ ሊረዳን ይችላል፣ ይህም ለተማሪዎች የተሻለ ድጋፍ እና ግብአትን ያመጣል። ምስጢራዊነት፡ በልጅዎ የሚቀርቡት ሁሉም መረጃዎች በሚስጥር ይቀመጣሉ። ስማቸው ወይም ማንኛቸውም መለያ መረጃ ከዚህ ጥናት በተገኙ ሪፖርቶች ወይም ጽሑፎች ላይ ጥቅም ላይ አይውልም። መረጃው ደህንነቱ በተጠበቀ ሁኔታ ይከማቻል እና የምርምር ቡድኑ ብቻ መዳረሻ ይኖረዋል።

በፈቃደኝነት ተሳትፎ፡ በዚህ ጥናት ውስጥ መሳተፍ ሙሉ በሙሉ በፈቃደኝነት ላይ የተመሰረተ ነው። ልጅዎ ለመሳተፍ ወይም ላለመሳተፍ የመወሰን ነፃነት አለው። እርስዎ ወይም ልጅዎ ላለመሳተፍ ከመረጡ ወይም በማንኛውም ጊዜ ከጥናቱ ለመውጣት ከወሰኑ

የእውቂያ መረጃ፡- በዚህ ጥናት ላይ ማንኛቸውም ጥያቄዎች ወይም ስጋቶች ካሉዎት፣

እባክዎን ዋናውን መርማሪ በኢሜል:hanaserbesa13@gmail.com ለማነጋገር ነፃነት ይሰማዎ።

ስልክ ቁጥር፡ 0987128702 የድጋፍ መግለጫ፡- ከዚህ በታች በመፈረም በዚህ ቅጽ ላይ የቀረበውን መረጃ እንዳነበቡ እና እንደተረዱት እና ልጅዎ በዚህ ጥናት እንዲሳተፍ ፍቃድ ሰጥተዎታል።

የወላጅ/የአሳዳጊስም፡-_____

ፊርማ፡ _____ ቀን፡- _____

የልጅ ስም፡ _____

Approval sheet

I, the undersigned MSc student, declare that I have submitted my research proposal work entitled asses Sleep Quality and Its Association with Depression among Adolescents at Secondary Schools of Adama City, Ethiopia

Submitted by: Hana Serebessa

Signature : _____ Date _____

This research proposal is accepted in its present form by the board of examiners as satisfying partial fulfillment of the requirements for the degree of master of Public Health

Approved by

Name of Primary advisor :

Signature _____ Date : _____

Name of co -Advisor :

Signature _____ Date : _____

Examiners :

1. Name :

Signature _____ Date _____

2. Name :

Signature _____ Date _____

DEPARTMENT HEAD

Name _____ _____ _____