



HAWASSA UNIVERSITY, COLLEGE OF MEDICINE AND HEALTH SCIENCES,
SCHOOL OF NURSING

PREVALENCE OF BODY IMAGE DISSATISFACTION AND ASSOCIATED FACTORS
AMONG HIGH SCHOOL ADOLESCENT IN HAWASSA CITY, ETHIOPIA, 2023

MSc THESIS

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HAWASSA UNIVERSITY, HAWASSA, ETHIOPIA

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BODY IMAGE DISSATISFACTION AND ASSOCIATED FACTORS AMONG HIGH SCHOOL ADOLESCENT IN HAWASSA CITY, ETHIOPIA, 2023

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APPROVAL SHEET

HAWASSA UNIVERSITY SCHOOL OF GRADUATE STUDIES ADVISORS' APPROVAL SHEET

This is to certify that the thesis entitled "Body Image Dissatisfaction and Associated Factors among High School Adolescent Students in Hawassa City" submitted in partial fulfillment of the requirements for the degree of Master with specialization in Pediatrics and Child Health Nursing, the Graduate Program of the School of Nursing, and has been carried out by Gemeda Billo under my/our supervision.

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I hereby declare that this MSc thesis is my original work and has not been presented for a degree in any other university, and all sources of material used for this thesis have been duly acknowledged.

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ABBREVIATION AND ACRONYM

AOR	Adjusted Odds Ratio
BID	Body Image Dissatisfaction
BMI	Body Mass Index
BSQ	Body Shape Questionnaire
COR	Crude Odd Ratio
CI	Confidence Interval
G.C	Gregorian calendar
Ht.	Height
HU	Hawassa University
HUCSH	Hawassa University Comprehensive Specialized Hospital
KG	Kilogram
PI	Principal Investigator
SATAQ	Sociocultural Attitudes Towards Appearance Questionnaire
SD	Standard Deviation
SPSS	Statistical Package for Social Science
TV	Television
UAE	United Arab Emirates
USA	United States of America
WHO	World Health Organization

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ABSTRACT

Background: Adolescence is a period wherein multiple intense bio-psychosocial maturation, physical appearance, and psychological changes happen rapidly and individuals at this stage are more concerned with their body image than any other age group. However, little is known about the prevalence of body image dissatisfaction and the factors associated with body image dissatisfaction.

Objective: To assess prevalence of body image dissatisfaction and identify associated factors among high school adolescents in Hawassa City, 2023.

Methods: A school-based cross-sectional study was conducted among 421 participants from April 20 to May 20, 2023, in Hawassa City. A stratified sampling technique was employed to select the study participants. A structured self-administered questionnaire was used to collect data. Anthropometric measurements of weight and height were taken to the nearest 0.1 kg and 0.5cm using SECA digital balance and height measuring tape in a standing position. The data was entered into Epi-data version 3.1 and exported and analyzed using the statistical package for social sciences (SPSS), version 24. A logistic regression model was fitted and used to identify the associated factors of body image dissatisfaction and statistical significance was declared at $P < 0.05$.

Result: The overall prevalence of body image dissatisfaction was 18.5% with [95% CI (14.8-22.2%)]. In this study being overweight/obese [AOR=7.8, 95% CI;(2.58-23.83)], engaging in a small amount of exercise [AOR=3.66, 95% CI; (1.34-10.0)], having moderate depression [AOR=3.6,95% CI:(1.25-10.40)], having severe depression [AOR=6.8, 95% CI; (1.94-24.22)], being at late age of adolescent [AOR=1.9, 95% CI; (1.07-3.39)], and having family pressure [AOR=2.2, 95% CI; (1.28-4.04)] were significantly associated with body image dissatisfaction.

Conclusion: According to this study, there is a high prevalence of body image dissatisfaction among high school adolescents. Therefore, encouraging physical activity and providing constructive family feedback would be appropriate strategies to address body image dissatisfaction.

Keywords: Adolescent, Body Image Dissatisfaction, Hawassa, Ethiopia

CHAPTER ONE

INTRODUCTION

1.1 Back Ground

Adolescents generally defined as individuals aged 10–19 years by the World Health Organization (WHO) are at the stage of life during which numerous physical and psychological changes occur quickly, making adolescents more concerned with their body image than people of any other age (Malla et al., 2021). Body image is the perception of one's anthropometric measurements, contours, and shape of the body, as well as the emotions correlated to these factors that influence one's happiness with the body or particular body parts (Silva et al., 2019). This perception, which is highly influenced by socio-demographic and environmental factors, may be positive or negative (Ferreiro et al., 2014).

Body image dissatisfaction (BID) refers to the negative attitudes, perceptions, or feelings that one has about one's own body (Heron et al., 2013). Although the causes of body dissatisfaction usually vary, it can affect men and women as well as boys and girls. Body dissatisfaction typically involves worries about weight and shape in women and girls, especially a desire to be thinner, while in men and boys a desire to be muscular (Grogan, 2021).

Dissatisfaction with one's body image has been linked to a number of demographic factors, including being adolescent and female (Flores et al., 2017); psychosocial factors, like being exposed to bullying (Levandoski and Luiz Cardoso, 2013); related lifestyle habits, like physical inactivity and irregular dietary practices (Shirasawa et al., 2015); and nutritional status, like being overweight.

The degree of this dissatisfaction may vary from person to person, and its effects on a person's life may range from mild to serious social issues, such as depression, low self-esteem, avoidance of social situations, and eating disorders with persistent effects on the quality of life (Weinberger et al., 2017).

Therefore, it is crucial to evaluate potential contributing factors, identify subgroups at higher risk, and determine the extent of body dissatisfaction among adolescents.

1.2. Problem Statement

In today's society, when there are enormous expectations to be skinny, fit, stylish, and beautiful, body image is a subject that is becoming increasingly important. Images of waif-like models are plastered all over television, movie screens, and magazine covers, delivering the message that success, happiness, and belonging only come with unachievable beauty. People frequently compare themselves to others' appearances in their circles of thinness and beauty, which leads them to judge both themselves and those around them negatively (Goonapienuwala et al., 2017)

According to studies done in different developed countries, the prevalence of negative body image among adolescents ranges from 35% to 81% for female adolescents and 16% to 55% for male adolescents (Moehlecke et al., 2020, Ribeiro-Silva et al., 2018). The studies conducted in a different area of Brazil state that the prevalence of body image dissatisfaction ranged from 19.5% - to 45.0% (Moehlecke et al., 2020, Santana et al., 2013a).

Studies done in Tunisia and Egypt among school adolescents showed that the prevalence of body image dissatisfaction was 42.4%, and 37.4% respectively (Mahfouz et al., 2018, Ben Ayed et al., 2019). One study done in Addis Ababa revealed that the overall poor self-perception of one's physical appearance was 51.6% (Abdo et al., 2023).

According to several studies, adolescent's body image is influenced by both biological and psychological factors, including depression, poor self-esteem, and the use of weight loss techniques, as well as factors like age, sex, puberty, and body composition (Moehlecke et al., 2020, ALAhmari et al., 2019). Peers, families, social surroundings, media, and others all have an impact on how people perceive things (Grogan, 2021).

It was well known that body dissatisfaction was a risk factor for severe health issues. Some of the side effects of body dissatisfaction include low self-esteem, isolation, obsession with appearance, depression, unhealthy body change behavior like diet, intense exercise, performance-enhancing drugs, and cosmetic surgery, body dysmorphic disorder, and low

academic performance are significant consequences of body image dissatisfaction (Bahaadinbeigy et al., 2014, Waghachavare et al., 2014).

Although national and international organizations pay more attention to how adolescents are satisfied with their body image perceptions to promote health and education, (Ribeiro-Silva et al., 2018), the issue of adolescent body image dissatisfaction and its associated factors is less explored. Similarly, to my knowledge; little is known on this issue in Ethiopia, specifically in Hawassa. As a result, this study was provided evidence by assessing the prevalence of body image dissatisfaction and its associated factors among high school adolescents in Hawassa, Ethiopia.

1.3. Significance of the study

Recent studies have shown that excessive concern with body image has increased, especially the prevalence of body image dissatisfaction (BID) has been increased among adolescents around the globe due to urbanization and increasing exposure to Western culture via communication technology(Musaiger et al., 2016, Musaiger et al., 2014).

The information gained from this study will inform us of the prevalence and associated factors of high school adolescent body image dissatisfaction and understanding adolescent body image can help to be aware of factors that contribute to body image dissatisfaction and develop interventions to improve body image. The findings may also helpful policymakers, high schools, and families to develop strategies to improve adolescents' overall well-being and positive body image. Understanding adolescent body image can help to reduce the stigma associated with body image dissatisfaction and the result gained from this study may serve as additional information for further research.

CHAPTER TWO

LITERATURE REVIEW

This chapter presents information from multiple pieces of research on the prevalence of body image dissatisfaction, its contributing factors, and how adolescents view their weight and shape simply and concisely.

2.1. Prevalence of Body Image Dissatisfaction

In both the global and regional contexts, the prevalence of body image dissatisfaction is rising at alarming rates (Mondal et al., 2021, Radwan et al., 2019). According to studies done in various parts of the globe, the prevalence of negative body image in developed countries among adolescents ranges from 35% to 81% for female adolescents and 16% to 55% for male adolescents (Moehlecke et al., 2020, Ribeiro-Silva et al., 2018).

The studies conducted in a different area of Brazil state that the prevalence of body image dissatisfaction ranged from 19.5%-45.0% and was more prevalent among girls than boys (Moehlecke et al., 2020, Santana et al., 2013a). Another cross-sectional study of 1432 high school students in the eastern Yucatan state of Mexico found that 32.7% of adolescents were unsatisfied with their bodies (Peña et al., 2019).

The cross-sectional study conducted among adolescent girls in the United States of America (USA) illustrates that 67.5% of girls were dissatisfied with their actual body figure and body image discrepancy increased with increasing weight status (Robbins et al., 2017). More than 81% of teenage girls in another German survey expressed unhappiness with their body image, with post-menarche girls reporting higher rates of dissatisfaction (Sarrar et al., 2020)

According to a study conducted in Malaysia, 78.1% of the respondents felt unsatisfied with their current BMI and physical appearance (Farah Wahida et al., 2011), while another study reported that 79.3% of adolescents believed their BMI was larger than it actually was (Cecon et al., 2017)

The study conducted in Ecuador also shows that the majority of individuals were underweight or of healthy weight, but nearly half of the obese adolescents (45.9%) reported body image dissatisfaction for their BMI and they had the plan to lose weight (Phillips, 2018).

According to a study conducted in the United Arab Emirates (UAE), 36.7% of students had body image dissatisfaction, which is almost a third of students and clearly shows a significant prevalence of BID (Alharballeh and Dodeen, 2021).

According to a study of Lebanese high school students, 60% of boys and 70% of girls are dissatisfied with their bodies (Sukariyah et al., 2014). Another study from the Mediterranean region shows that 82.7% of participants were satisfied with their body image, while 17.3% of them were not (Escrivá et al., 2021).

The studies done in Tunisian and Egyptian among school adolescents showed that the prevalence of body image dissatisfaction was 42.4%, and 37.4% respectively (Mahfouz et al., 2018, Ben Ayed et al., 2019) and a single study done in Addis Ababa revealed that the overall poor self-perception of one's physical appearance was 51.6% (Abdo et al., 2023).

2.2. Factors Affecting Body Image Dissatisfaction

According to a study done on school youngsters in northeastern Mexico, there is a significant relationship between BMI and perceived body image, and there are substantial sex differences between the measured BMI and perceived body image. Girls expressed greater dissatisfaction with their body image than boys did (Ávila-Ortiz et al., 2022).

Another study conducted in the United States of America (USA) revealed that girls had high body dissatisfaction above the 50th percentile of BMI, with the odds of 1.96 times that of BMI below the 50th percentile however, boys had high body dissatisfaction when they had BMI below the 25th percentile, and dramatically greater body dissatisfaction above the 75th percentile and this study also detected that older age was strongly associated with greater weight and shape concern among girls with a ($p < .0001$) (Calzo et al., 2012) while other in India shows that early stages of adolescence, are when body image awareness increases and many teenagers feel self-conscious about their appearance (Margaret et al., 2018)

According to a systematic review of 17 publications conducted in Germany, female gender and increased body dissatisfaction were significantly correlated with obesity ($p = 0.007$) and normal weight ($p = 0.001$), respectively (Weinberger et al., 2016).

Another study conducted in Sri Lanka revealed that Overweight/obese adolescents had four times greater body image dissatisfaction, and underweight adolescents had three times greater body image dissatisfaction when compared to students with normal BMI (OR: 4.18, CI: 1.209, 14.416, $p=0.02$ and OR: 3.2, CI: 1.073, 9.852) respectability and male adolescents had two times greater body image dissatisfaction than female adolescents (OR: 1.9. CI: 1.020,3.407)(Liyanage et al., 2021a).

A similar study done in Brazil states that the prevalence of body image dissatisfaction was higher among girls adolescents who had higher BMI than those who had normal BMI with AOR 1.38,(CI;1.09-1.73) and boys two times with AOR (2.26, CI;1.08-4.75) (Santana et al., 2013a). Another study done in Brazil shows adolescents with depressive symptoms had 3.7 times greater body image dissatisfaction compared to those without symptoms (OR: 3.7, CI: 2.8-4.9) (Flores-Cornejo et al., 2017) and according to a study done in this country regarding physical activity, greater body dissatisfaction was associated with adolescent engaged in low levels of physical activity (AOR=1.14, CI: 1.28-1.55)(Gomes et al., 2021) while other study in Korea shows student who did not exercise in school gym has 1.09 greater body image distortion than who exercise (AOR=1.09, CI: 1.02-1.63)(Chae, 2022)

According to a study in Iran parental body image, particularly during the developmental years of children, is one of the key contributors to natural body satisfaction. Parents' critical comments about their children's bodies were substantially correlated with body dissatisfaction compared to those who did not (Shoraka et al., 2019). In determining how people perceive their bodies, peers are crucial. Young people who had thin peers were more likely to experience poor self-esteem and body dissatisfaction because they saw being thin as a goal (Rodgers et al., 2021). Lower self-esteem is associated with higher levels of body image dissatisfaction among youth with excessive social media use(Franchina et al., 2018)

The study done in Tunisia on body image dissatisfaction among adolescents showed that being female increases 1.5 times of body image dissatisfaction compared with male

adolescents (AOR = 1.53, p = 0.007) (Ben Ayed et al., 2019) and the study done in Addis Ababa revealed that adolescent who had a normal range of BMI had 2.56 times more body image satisfaction than those higher BMI (AOR = 2.56; 95% CI: 1.45, 4.54)(Abdo et al., 2023).

2.3: Conceptual Framework

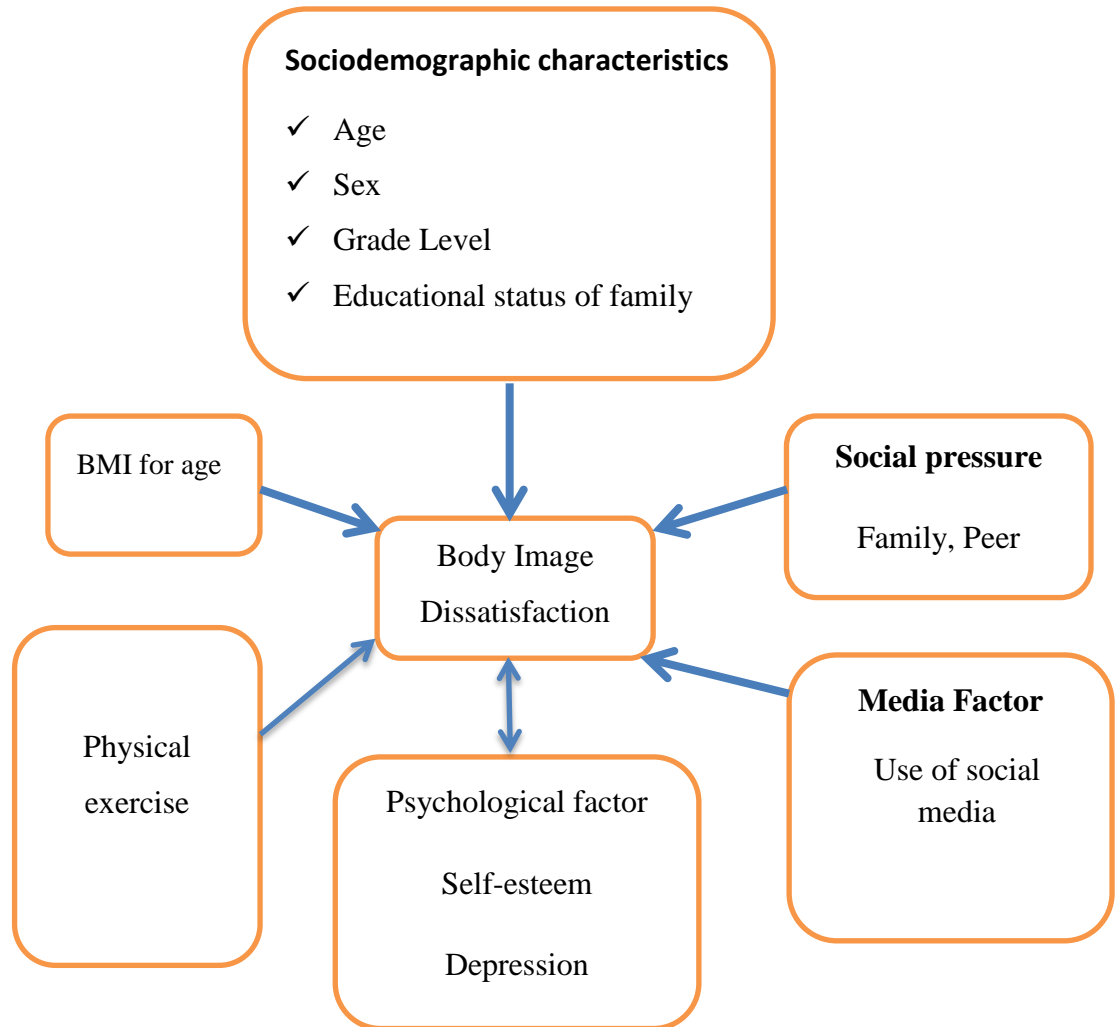


Figure 1: A conceptual framework for body image dissatisfaction and factors associated adapted from (Schneider et al., 2013, Costa et al., 2016, Escrivá et al., 2021, Calzo et al., 2012)

CHAPTER THREE

OBJECTIVES OF THE STUDY

3.1. General Objective

- To assess the prevalence of body image dissatisfaction and associated factors among high school adolescents in Hawassa city, Sidama, Ethiopia, 2023.

3.1.1. Specific Objectives:

- ✓ To determine the prevalence of body image dissatisfaction among high school adolescents in Hawassa city, Sidama, Ethiopia, 2023.
- ✓ To identify factors associated with body image dissatisfaction among high school adolescents in Hawassa City, Sidama, Ethiopia, 2023

3.2. Research Question

- ✓ What is the overall prevalence of body image dissatisfaction among adolescents?
- ✓ What are the factors associated with body image dissatisfaction among adolescents?

CHAPTER FOUR

MATERIALS AND METHODS

4.1. Study area and period

This study was conducted in both governmental and private high schools in Hawassa which is the capital of Sidama regional state from April 20 to May 20. Hawassa is located 275km south of Addis Ababa (the capital of Ethiopia). According to the city education administration office, there were 16 private and 14 public high schools in Hawassa. The total number of students was 34,130 (16546 males and 17,584 females), and 8433 (4615 males and 3818 females) in public and private high schools respectively.

4.2. Study Design

The school-based cross-sectional study was conducted from April 20 to May 20, 2023, in Hawassa city, Sidama regional state, southern Ethiopia.

4.3. Population

4.3.1. Source population

- All high school adolescent in Hawassa city

4.3.2. Study population

- ✓ All randomly selected adolescents in selected governmental and private high schools.

4.4. Inclusion and Exclusion Criteria.

4.4.1. Inclusion criteria

- ✓ All adolescent students who were attending class in the selected high school during the data collection period.

4.4.2. Exclusion criteria

- ✓ Adolescents with kyphosis, lordosis, and Scoliosis
- ✓ Pregnant adolescent

4.5. Sampling

4.5.1. Sample Size

The sample size was calculated using the single population proportion formula on the assumptions of a 95% confidence interval, and a 5% degree of precision, by taking a 51.6% proportion of poor self-perception with one's physical appearance taken from a previous study conducted in Addis Ababa which becomes 383 (Abdo et al., 2023). After adding a 10% non-response rate, a total of 421 students have been enrolled in the study.

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

Where:

n: -minimum sample size required for the study

d: -margin of error = 0.05% (5%)

Z_{α/2}: -value of standard normal distribution (z=1.96) with a confidence interval of 95%

P: - A 51.6% is taken from a study conducted in Addis, Ethiopia.

$$n = \frac{(1.96)^2 (0.516 * 0.484)}{(0.05)^2} = 383$$

$$(0.05)^2$$

= non respondent rate 10% = 38

= Total population size = 421

Table 1: The sample size determination package Epi-info version 7.2 by different independent variables of body image dissatisfaction like BMI, age, and prevalence of BID

Variables	Outcome exposed(p1)/unexposed(p2)	Result	Non-response rate	Final sample	Reference
Prevalence of body image dissatisfaction	0.516/0.484	383	38	421	(Abdo et al., 2023)
BMI >18.5	0.51/0.3	188	19	207	
Age groups/late adolescents	0.413/0.587	342	34	376	(Ben Ayed et al., 2019)

4.5.2. Sampling procedure

A stratified random sampling technique was employed to select the study subjects. According to the Hawassa city education administration, there were 30 high schools in the city, of which 16 were private and 14 were public. Five from private high schools and four from public high schools were chosen at random using a lottery technique, with governmental high schools being considered strata one and private high schools being strata two. The sample size was allocated proportional to the number of students in each chosen school. Section from each grade 9 to 12 to be included was chosen by lottery from the secondary school that was chosen and a systematic random sampling approach was used with the list of students' names as a sampling frame. Look at the sampling procedure in Table 2 below.

Table 2: The sampling procedure in selected high schools, 2023

School category	Name of school	Total number of students in each High school	Number of samples		
			Male	Female	Total
Private	BNB	854	9	9	18
	SOS	402	5	4	9
	Ethio-Parent	705	6	6	12
	Tabor Y/maikel	590	11	13	24
	Union Kiir 1	1172	8	7	15
Public	Alamura	7962	81	83	164
	Addis ketema	3771	39	38	77
	Misrak Corra	2928	28	32	60
	Adare Millennium	2021	20	22	42
	Total	20,405	207	214	421

4.6. Variables of the Study

4.6.1. Dependent variable

- Body image dissatisfaction

4.6.2 Independent variables

- ▶ BMI for age
- ▶ Age
- ▶ Sex
- ▶ Religion
- ▶ Family influence
- ▶ Peer influence
- ▶ Educational status of family
- ▶ Media influence
- ▶ Self-esteem
- ▶ Depression
- ▶ Grade Level
- ▶ Physical Activity

4.7. Operational definition

- **Adolescent:** A person of age between 10 and 19 years
- **Middle adolescent:** Adolescent of age 14-17
- **Late adolescent:** Adolescent of age 18-19 (WHO, American Academy of Pediatrics).
- **BMI** for age of an adolescent is a measure of body size by measuring a person's weight and height with their sex-specific age chart.
 - ✓ **Underweight:** BMI for age and sex less than 5th percentile (CDC 2022)
 - ✓ **Normal weight:** BMI for age and sex 5th percentile to less than the 85th percentile (CDC 2022)
 - ✓ **Overweight:** BMI for age and sex 85th percentile to less than the 95th percentile (CDC 2022)
 - ✓ **Obesity:** BMI for age and sex greater than or equal to 95th (CDC 2022)
- **Body image dissatisfaction (BID):** The short version of the body shape questionnaire (BSQ) consists of 14 self-scored questions used, and;
 - ✓ **No Body Image dissatisfaction:** Score less than 80
 - ✓ **Body Image dissatisfaction:** score greater than or equal to 80 (Toselli et al., 2023)
- **Physical Activity:** Using the Physical Activity Rating Scale-3(PARS-3)
 - ✓ **A small amount of exercise;** a total score equal to or less than 19,
 - ✓ **A moderate amount of exercise;** a total score of 20 to 42, and
 - ✓ **A large amount of exercise;** a score equal to or greater than 43 (Liang, 1994)
- **Depression:** The Patient Health Questionnaire (PHQ-9) was used to screen for depression
 - ✓ **Minimal to mild depression:** a score of 0-9,
 - ✓ **Moderate depression:** a score of 10-19

- ✓ **Severe depression:** a score greater than or equal to 20 (Kroenke et al., 2001).
- Family, Peer, and media pressure: Score higher than mean for each(Schaefer et al., 2015a)
- Self-esteem: Rosenberg self-esteem scale was used and
 - ✓ **Low level of Self-esteem:** a score of 0-14,
 - ✓ **The normal level of Self-esteem:** a score of 15-25,
 - ✓ **High level of Self-esteem:** a score greater than 25 (Blascovich et al., 1991, Sinclair et al., 2010).

4.8. Data Collection Method and Procedure

4.8.1. Data Collection Tool

Data were collected by using pretested, structured self-administered questionnaires adopted from different related literatures. For the assessment of body image dissatisfaction, the short version of the body shape questionnaire (BSQ) consists of 14 self-scored questions using the Likert scale, with answers varying from 1 - never; 2 - rarely; 3 - sometimes; 4 - often; 5 - very often; to 6 – always was asked.

Depression: Patient Health Questionnaire (nine-item version) (PHQ-9) was used to screen for depression. PHQ-9 is a short scale consisting of nine questions, which are symptoms of depression, enabling criteria-based diagnosis of depression. The score assigned to each of these items ranges from zero (not at all) to three (nearly every day), thus allowing for a minimum and maximum score of zero and 27, respectively, with higher scores indicating more severity of depression(Kroenke et al., 2001)

For the assessment of self-esteem, the Rosenberg self-esteem scale was used. The scale asks about both the positive and negative aspects of one's self-worth. A four-option Likert scale, from strongly agree to strongly disagree, and was used for all questions. Responses are graded

as follows for positive statements: 0= strongly disagree, 1 = disagree, 2 = agree, and 3 = strongly agree. This scoring is inverted for negative statements.

For the assessment of family, peer, and media pressure: Sociocultural Attitudes towards Appearance Questionnaire-4 (SATAQ-4) was used. The SATAQ-4 included 12 items, with three subscales namely; family pressure (assesses subjective feelings of family pressure for having an ideal appearance, four items); peers pressure (assesses subjective feelings of friends and peers pressure for having an ideal appearance, four items); and media pressure (assesses subjective feelings of media pressure for having an ideal appearance, four items). These items are scored based on a five-point Likert scale ranging from ‘definitely disagree’ (one point) to ‘definitely agree’ (five points) (Schaefer et al., 2015a).

To measure physical activity, the Physical Activity Rating Scale-3 (PARS-3) a three-item self-reported scale, containing exercise time, exercise intensity, and exercise frequency was used. Each item is rated from 1 to 5, and the total score of physical activity is computed by the following equation: $\text{intensity} \times (\text{time}-1) \times \text{frequency}$, with a range of 0 to 100. The higher the score, the more physically active the person is(Liang, 1994).

For anthropometric measurement, SECA digital weight scale and height measuring tape fixed vertically to the wall were used.

4.8.2. Data collection procedure

A support letter written by Hawassa University was given to each school principal and permission was requested. In those schools in which we got permission, selections of classes were made. Three BSc nurses and one MSc nurse were recruited for data collection and supervision respectively. Training was provided on how to administer and orient the questionnaire to the subject as well as measure height and weight.

After the class selection was performed in each school, each respective classroom teacher in the selected class and PI gave orientation to the study participant. The selected students were provided with a consent form to fill out the questionnaire.

Anthropometric measurement of weight was taken to the nearest 0.1 kg using the calibrated SECA electronic weight scale, and height was measured to the nearest 0.5 cm using a height measuring tape fixed to the wall in a standing position after students removed their heavy clothing and shoes.

4.8.3. Data Quality Control

To assure data quality, the adopted English questionnaire was translated into Amharic and back-translated to English to check for its consistency. The weight and height of the study participant was measured using a standard measuring scale. The recruited data collectors were trained by an investigator on the objective, confidentiality of information, relevance of the study and respondent's rights, informed consent, and techniques of questionnaire administration and anthropometric measurement. The reliability of the questionnaire was pretested among 5% (21) of total samples in Shashemene Corra public High School which had similar characteristics before the actual data collection to check its internal consistency using Cronbach's alpha test using SPSS version 24. The questionnaire was evaluated by the investigator and supervisor and daily discussions on collected data by the investigator after each data collection day was done to enhance the quality of the data.

4.8.4. Data Processing and Analysis

The collected data were rechecked for completeness, for proper code, entered into Epi Data version 3.1 software packages, and analyzed using Statistical Package for Social Sciences (SPSS) version 24. Descriptive analysis was computed and presented with frequency tables, and percentages.

The BSQ was divided into two groups in order to satisfy the dichotomous nature of the answer variable: No body image dissatisfaction (defined as devoid of body dissatisfaction) and body image dissatisfaction (With some level of dissatisfaction: mild, moderate, or severe). The scores from the 14-item BSQ were added to get a minimum and maximum score of 14 and 84 respectively. The total score was calculated on the sum of all the values multiplied by 34/14 (Dowson and Henderson, 2001, Cooper et al., 1987, Matera et al., 2013) A score less than 80 indicates no body image dissatisfaction and a score greater than or equal to 80 indicates the presence of body image dissatisfaction. The internal reliability (Cronbach's alpha) of the questionnaire was 0.93(Añez et al., 2018) in a previous study and the internal reliability of the questionnaire in this study is 0.74.

The following cut-off values were used to classify depressed symptoms: 0–9 = minimal to mild depressive symptoms, 10–19 = moderate depressive symptoms, and equal to 20 or more considered severe depressive symptoms(Kroenke et al., 2001)

To determine the respondent's degree of self-esteem, the scores for the 10 questions are added. Higher scores indicate higher levels of self-esteem. Scores can range from 0 to 30 (Sinclair et al., 2010, Blascovich et al., 1991)

For Sociocultural Attitudes towards Appearance Questionnaire-4 (SATAQ-4, the total sum scores ranged from 12 to 60, and the 3 sub-scores from 4 to 20 for each pressure component. The score for each was summed up and divided by four. Then mean of the mean was done and a score greater than the mean of the mean indicated pressure (Schaefer et al., 2015a)

For the analysis Physical Activity Rating Scale-3 (PARS-3) total score equal to or less than 19 is considered a small amount of exercise, 20 to 42 is considered a moderate amount of

exercise, and a score equal to or greater than 43 is considered a large amount of exercise (Liang, 1994)

Model goodness-of-fit was checked by the Hosmer–Lemeshow test and the result was 0.82. Bivariate logistic regression was fitted to screen candidate variables with a p-value < 0.25. Variables, with a p-value of <0.25 in the binary logistic regression were fitted into the multivariable logistic regression. Adjusted odds ratio (AOR) with their 95% CI was computed to assess the strength of the association between body image dissatisfaction with independent variables. Variables with a p-value of ≤ 0.05 in the multivariable analysis were considered as significantly associated with the outcome variable. Then the results were presented in the form of a table and a summary of statistics appropriately.

4.9. Ethical Consideration

Ethical clearance was issued from the Hawassa University College of Medicine and Health Sciences Institutional Review Board. Further permission was obtained from Hawassa City education administration and from selected private and governmental schools which described the objectives of the study, then delivered to selected school directors, and the importance of the study was explained for each participant. Data was collected after full informed written assent and consent was obtained from students and family. Confidentiality of the information was maintained throughout the study by excluding names as identification in the questionnaire and keeping their privacy during data collection

CHAPTER FIVE

RESULT

5.1. Socio-demographic characteristics of the participants

A total of 416 participants from the two groups of schools, public 331 (79.6%) and private 85 (20.4%) were involved with a response rate of 98.9%. The mean age of the adolescents was 17.35(SD±1.26) which ranges from 14-19. Around half of the participants, 204 (49%) were male. The mean BMI of the study participants was 21.34(SD±3.48) kg/m² ranging from 14.1-34.5 kg/m². The majority of the study participants, 299 (71.9%), were normal weight, followed by 64(15.4%) underweight. Among the overweight, more than two-thirds of participants 41(77.3%) were females.

According to ethnicity and religion, around half of 203 (48.8%) of the study participants were Protestants, and more than half 240(57.7%) were Sidama followed by Amhara 71(17.1%). Parental educational status revealed that the majority 314 (75.5%) of the fathers had attended more than secondary school education, and more than half 238 (57.2%) of the mothers had attended more than secondary school education.

Based on the Physical Activity Rating Scale (PARS-3) score in this study, more than half 228(54.8%) of the participants engaged in a small amount of exercise while 96(23.1%) and 92(22.1%) were engaged in moderate and large amounts of exercise respectively. Regarding the socio-cultural attitudes towards appearance questionnaire -4 (SATAQ-4) nearly half 195(46.9%) of the participants had media pressure, while around one-third 150(36.1%), and 134(32.2%) of the participants had family and peer pressure respectively. According to the Patient Health Questionnaire (PHQ-9) level of depression, 22(5.3%) and 12(2.9%), participants had moderate and severe depression respectively and 14(3.4%) participants had low levels of self-esteem as shown in Table 2.

Table 3: Socio-demographic characteristics of the participants

Socio-demographic characteristics		Frequency	Percent
Sex	Male	204	49
	Female	212	51
Age	Middle adolescent	202	48.6
	Late adolescent	214	51.4
School type	Public	331	79.6
	Private	85	20.4
BMI for age	Underweight	64	15.4
	Normal weight	299	71.9
	Overweight and obese	53	12.7
Religion	Orthodox	137	32.9
	Protestant	203	48.8
	Muslim	23	5.5
	Catholic	10	2.4
	Others	43	10.3
Ethnicity	Sidama	240	57.7
	Amhara	71	17.1
	Wolaita	59	14.2
	Oromo	23	5.5
	Others	23	5.5
Mothers' educational status	No formal education attended	62	14.9
	Primary 1-8 attendee	116	27.9
	Secondary (9-12)	112	26.9
	Collage and above	126	30.3
Fathers' educational status	No formal education	30	7.2
	Primary (1-8)	72	17.3
	Secondary (9-12)	135	32.5
	College and above	179	43.0

Table 4: Socio-demographic characteristics of the participants, continued

Physical activities	a small amount of exercise	229	55.0
	moderate amount of exercise	94	22.6
	large amount of exercise	93	22.4
Media pressure	No media pressure	221	53.1
	Had media pressure	195	46.9
Family pressure	No family pressure	266	63.9
	Had family pressure	150	36.1
Peer pressure	No peer pressure	282	67.8
	Had peer pressure	134	32.2
Depression level	Minimal to mild depression	382	98.1
	Moderate depression	22	5.3
	Severe depression	12	2.9
Self-esteem level	Low self-esteem	14	3.4
	Normal self-esteem	324	77.9
	High self-esteem	78	18.8

5.2. Prevalence of Body Image Dissatisfaction among adolescents

In this study, the overall prevalence of body image dissatisfaction was 18.5% with [95% CI (14.8-22.2%)] as shown in Figure 2.

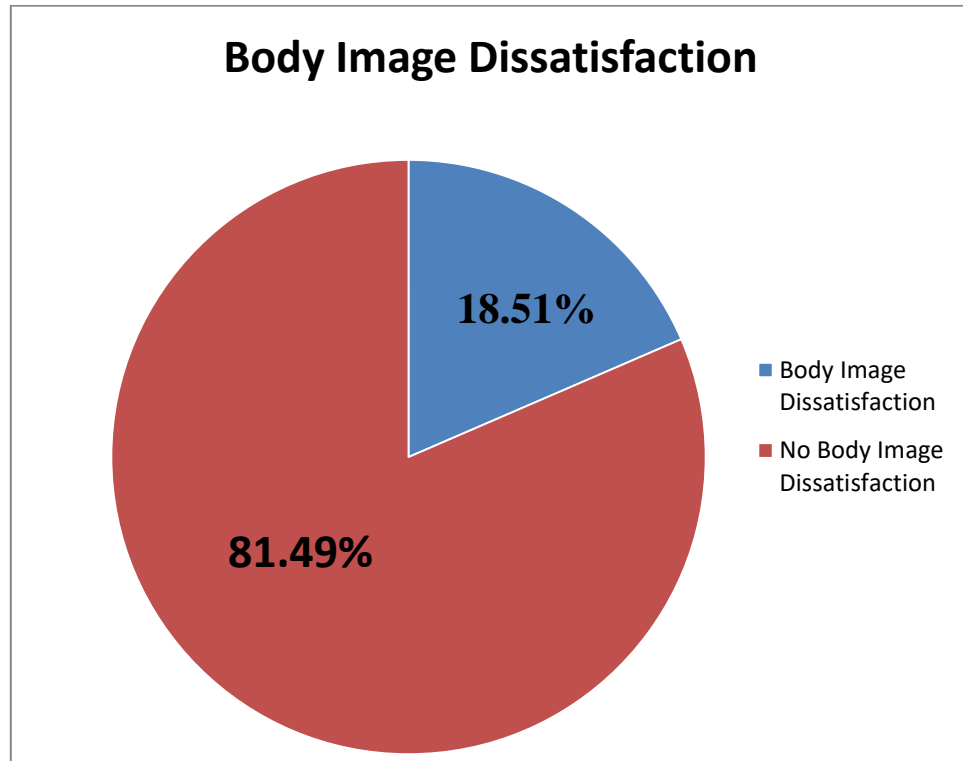


Figure 2 -Prevalence of body image dissatisfaction among adolescents in Hawassa City High School, Sidama Ethiopia, 2023.

5.3. Factors Affecting Body Image Dissatisfaction of Adolescents

In Bivariable regression, variables that showed a p-value less than 0.25 were considered candidate variables for the multivariable regression. In Bivariable regression, age, sex, grade, BMI for age, exercise amount, self-esteem, depression, media pressure, family pressure, and peer pressure were the significant factors in body image dissatisfaction.

After adjusting confounding variables, in multivariable regression, overweight/obese, having moderate depression, and severe depression, engagement in small and moderate amounts of exercise, being a late adolescent, and having family pressure were significantly associated ($p < 0.05$) factors for body image dissatisfaction of adolescents.

The odds of being overweight/obese are 7.8 times [AOR=7.8, 95% CI; (2.58-23.83)] higher compared with underweight and normal-weight adolescents. An adolescent who engaged in a small amount of exercise is 3.7 times [AOR=3.66, 95% CI; (1.34-10.00)] higher body image dissatisfaction than those engaged in a large amount of exercise. Similarly, those who engaged in a moderate amount of exercise are 3.2 times [AOR=3.2, 95% CI; (1.07-9.66)] higher body image dissatisfaction than those engaged in a large amount of exercise. The odds of having moderate depression are 3.6 times [AOR=3.6, 95% CI; (1.25-10.40)] higher than those who have minimal to mild depression and the odds of having severe depression are 7 times [AOR=6.8, 95% CI; (1.94-24.22)] higher when compared with those who have minimal to mild depression for their body image dissatisfaction. When we see the effect of age, the odds of being a late adolescent is 2 times higher [AOR=1.9, 95% CI; (1.07-3.39)] to have body image dissatisfaction compared with middle-aged adolescents.

Last but not least factor of body image dissatisfaction is pressure from their family. The odds of having family pressure are 2.3 times [AOR=2.2, 95% CI; (1.28-4.04)] higher compared to those without family pressure toward their body image perception. However, no significant associations were detected for the other variables including, sex, grade, self-esteem, media pressure, and peer pressure

Table 5: Bivariable and multivariable regression of factors with body image dissatisfaction of adolescents in Hawassa city high schools, Sidama Ethiopia, 2023

Independent variables		Dependent variable		COR	95% CI	AOR	95%CI
		BID	No BID				
BMI for age	Underweight	6	58				
	normal weight	42	257	1.580	.641-3.89	1.45	(.54-3.91)
	Overweight/obese	29	24	11.68	4.30-31.74*	7.84	(2.58-23.83)**
Exercise amount	Small amount exercise	55	174	5.563	2.15-14.39*	3.66	(1.34-10.00)**
	Moderate amount exercise	17	77	3.886	1.37-11.03*	3.21	(1.07-9.66)**
	Large amount exercise	5	88			1	
Depression level	Minimal to mild depression	59	323				
	Moderate depression	11	11	5.475	2.27-13.21*	3.61	(1.25-10.40)**
	Severe depression	7	5	7.664	2.35-24.96*	6.85	(1.94-24.22)**
Age	Middle adolescent	49	153				
	Late adolescent	28	186	2.127	1.28-3.55*	1.91	(1.07-3.39)**
Family pressure	No family pressure	30	236				
	Has family pressure	47	103	3.590	2.15-5.99*	2.27	(1.28-4.04)**

Key: AOR=Adjusted Odd Ratio, COR=Crude Odd Ratio, CI=Confidence Interval, *Significance in bivariate, **Significance in multivariable

CHAPTER SIX

DISCUSSION

Adolescents in high school are particularly susceptible to different pressures to fit into ideal physical appearance standards that are thought to be accepted cultural norms. They are vulnerable to several stresses at a crucial stage of their development, which could undermine their confidence. According to our information, this study is among few study of body image dissatisfaction that hoped to help in understanding how high school adolescents perceive their bodies and how that perception is associated with socio-demographic characteristics, their body weight, and their physical activity habits, which will add significant insights into body image perception among adolescents in our country. This study used the short version of the body shape questionnaire (BSQ) consisting of 14 self-scored questions using the Likert scale, with answers varying from 1 never - 6 always was asked with a total of 84 scores which was a validated scale used to measure body image dissatisfaction(Anju Kayathri S, 2021).

According to this study, 18.5% [95% CI, (14.8-22.2%)] of adolescents were dissatisfied with their body image which is in line with the study conducted in Brazil (19.5%) (Santana et al., 2013b) and Jordan (21.2%) (Mousa et al., 2010). However it is lower than the study done in Addis Ababa (51.6%) (Abdo et al., 2023), in United Arab Emirates(36.7%) (Alharballeh and Dodeen, 2021), and in urban Sri Lankan adolescents(73%) (Liyanage et al., 2021b), and higher than the study conducted in south America Lima, Peru (11.3%) (Flores-Cornejo et al., 2017).

These variations could result from the use of various methodological tools for BID identification. We utilized a consistent number to categorize BID and we used self-administer questions that might bring about this difference. Some research used means to describe poor and good body image(Abdo et al., 2023), and some research used varied body figures to collect data (Andrade et al., 2023). The socio-cultural and demographic makeup of the populations may also be a factor in these discrepancies. Different cultures have distinct beauty ideals and standards, which can influence body image dissatisfaction. For instance, societies that prioritize thinness may have higher rates of body image dissatisfaction compared to those

that embrace diverse body types. Students from rural areas have been integrated into high schools in our study and may receive a little concern for how they perceive their bodies.

In this study body mass index for age was significantly associated with factors of body image dissatisfaction. The finding was consistent with the studies conducted in Malaysia (Latiff et al., 2018), Brazilian (Santana et al., 2013b), Sri Lankan adolescents (Liyanage et al., 2021b), Egypt (Keshk et al., 2019), and United Arab Emirates (Alharballeh and Dodeen, 2021)

This is probably due to the promotion and acceptance of thin idealization in the global media on the one hand, and social pressures on the other can be effective in increasing overweight adolescents' feelings of body dissatisfaction. This is likely due to the fact that today being slim is one of the criteria for beauty and sexual attractiveness, especially for girls. Currently the rate of overweight and obesity has increased as a result of decreased mobility and a change in the kind of nutrition (Shoraka et al., 2019, Chang et al., 2013). Thus adolescent obesity is now understood to increase the chance of developing unhealthy weight control, anxiety, and depressive behaviors. These circumstances may favor continued BID (Santana et al., 2013b).

The amount of physical exercise is another determinant factor of body image dissatisfaction among adolescents. The finding is supported by studies done in Korea, (Chae, 2022); Belgium (Patte et al., 2016). This might be due to physical activity being beneficial to health by improving body function and weight loss, physical appearance, increasing self-esteem, and boosting a positive body image (Tiggemann, 2015). As adolescents spend a lot of time at school and have to focus on schoolwork, the amount of physical activity time decreases. This study and previous studies showed that participation in school exercise reduced the risk of body image distortion. Therefore, it is necessary to promote school exercise for the health and positive body image recognition of adolescents.

According to this research, the odds of having family pressure are higher compared to those without family pressure toward their body image perception. This is supported by the study done in different areas of Iran (Naeimi et al., 2016, Garousi et al., 2017, Shoraka et al., 2019). The possible reason could be family, which is the primary element influencing body image and has a significant impact on how children perceive their bodies. Because of thoughts about

their bodies or the bodies of others, as well as the standards of beauty set by their parents, peers, and others, children of all ages are constantly exposed to these issues. Another reason would be that some communities believe that a strong masculine appearance is associated with prosperity and authority. As a result, the family reinforces the effort to achieve this ideal body image, and failure to do so may lead to BID.

Another determinant factor of body image dissatisfaction among adolescents is depression. The odds of having moderate depression and severe depression are higher than those who have minimal to mild depression, which is supported by the study done in Almeida in Portugal (Shoraka et al., 2019), South America lima, Peru (Flores-Cornejo et al., 2017), rural area of India (Waghachavare et al., 2014), in Chile (Delgado-Floody et al., 2021).

This may be due to the complex relationship between body dissatisfaction and mental health. Adolescents who seek to meet unrealistic expectations of beauty may have poor perceptions of their bodies, which could be one of the possible causes. Frustration and unhappiness may arise from these fruitless efforts to alter their bodies(Chen et al., 2015). The other reason is that adolescents who are depressed are more prone to feeling bad, including hopelessness, anger, and worry.

The last determinant factor of body image dissatisfaction detected according to this research is subgroups of students' age. The odds of being a late adolescent is 2 times higher to have body image dissatisfaction compared with middle-aged adolescents, which is in line with the study done by Iranian (Hatami et al., 2015) and Brazil (Santana et al., 2013b)

The possible reason is that late adolescence is a time of transition into adulthood and they may become more conscious of their weight status and societal expectations. If they are obese, they will be less satisfied because they will worry about being judged by others. The other reason could be increased social media use; late adolescents are also more likely to use social media than younger adolescents. Social media can be a source of positive body image messages, but it can also be a source of negative body image messages, such as unrealistic beauty standards and maltreatment.

6.1. LIMITATIONS OF THE STUDY

The major limitation of this study was as nature of the cross-sectional study, which may not explain the temporal relationship between the outcome variable and some explanatory variables. Due to the quantitative nature of the data analysis, a less comprehensive picture of the issue and its contributing elements may be presented.

Data was collected using a self-administered body shape questionnaire to examine body image dissatisfaction. The self-reported data may be affected by adolescents' subjective responses and responses based on recall. As a result, if the figure rating scale had been used to gather data, the body image dissatisfaction results might have been higher than those of this study.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATION

7.1. CONCLUSION

According to this study, we conclude that there is a high prevalence of body image dissatisfaction among adolescents enrolled in public and private high schools in Hawassa City. The results also show that; being overweight/obese, having moderate depression and severe depression, engaging in small and moderate amounts of exercise, being a late adolescent as well, and having family pressure were determinant factors for body image dissatisfaction of adolescents. Therefore, interventions to correct body image dissatisfaction should be provided for controlling overweight/obesity and depression by encouraging students to engage in large amounts of exercise and providing constructive family feedback.

7.2. RECOMMENDATION

The data from the present study provides valuable information regarding body image dissatisfaction and its determinant factors. According to this study, body image dissatisfaction among adolescents is highly prevalent. Therefore; the researcher recommends

- The Ministry of Health and regional health bureau recommended including policies and initiatives that support healthy living, physical activity, and media outreach to raise awareness of the problem.
- Hawassa City Public Health Authority needs to be aware adolescents and their families work to achieve normal weight, develop a normal body mass index, and avoid depression by engaging in physical exercise which strengthens positive body image perceptions of their physical appearance.
- Hawassa City High Schools and youth centers need to include school education programs aimed to prevent the development and worsening of body image dissatisfaction and to correct misperceptions regarding body image by raising the body esteem of the student through;

- ✓ Teaching students about healthy body image, and challenging negative stereotypes about body size and shape.
- ✓ Creating a safe and supportive environment: by providing positive messages about body diversity, and creating opportunities for students to discuss their feelings about their bodies.
- ✓ And also have to increase access to enough sports fields to control overweight and to strengthen their physical fitness, which increases their body image perception of their physical appearance.
- Parents should model a healthy body image and be aware of the messages they are sending about body image to their children. They should avoid making negative comments about their own or other people's bodies, and they should encourage their children to be active and healthy
- Further well-organized studies that include other variables that enable the determination of underlying causes of body image dissatisfaction need to be done.

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ANNEXES

Annex I: Informed Consent and/or Assent Form (English version)

Subject information sheet

Hello,

My name is Gameda Billo. I came from Hawassa University College of Medicine and Health Sciences, School of Nursing. I am conducting my research with the title “Body image dissatisfaction and associated factors among high school adolescent students in Hawassa City”. I received permission from Hawassa University College of Medicine and Health Sciences, the School of Nursing, and the Hawassa City Education Administration Bureau to conduct this study.

Your participation is purely based on your willingness. You are free to decide whether or not to participate in this study. If you agree to take part in the study, your height and weight will be determined using conventional measuring devices, and you will be questioned briefly about any concerns you may have had about your body shape in the past four weeks, other questions assess your self-esteem, physical activity, media, and societal influence. Only light clothes will be worn during weight measurement and height will be measured with bare feet. The measurement and question will take about 30 minutes.

The study could provide baseline data for policymakers and relevant stakeholders for designing effective prevention of body image dissatisfaction and overweight/obesity control programs and strategies. The information that you provide will be kept confidential by using only code numbers. Your name will not be written on the questionnaire. No one will have access to the non-coded data except the principal investigator and the data will not be used for purposes other than the study.

Informed Consent and/or Assent Form

Based on the understanding of the above information, are you willing to participate in this study?

- A) Yes
- B) No

If yes, I will continue and

If no I will skip to the next participant after writing the reasons for refusal _____

Respondent (For 18 or more years old)

Signature _____ Date _____

Respondents Parent (for those under 18 years old)

Signature _____ Date _____

Name of the person obtaining parental permission _____

For further explanation use the Principal Investigator’s Address;

Name: Gemeda Billo Email: agabillo2014@gmail.com

Cell phone: +251 941547579

Instruction: circle all the possible answers from the choice provided.

Annex II:- Questionnaires English Version

Hawassa University College of Medicine and Health Sciences, School of Nursing

Part I: - Socio-demographic characteristics

Questionnaire ID No. _____ school name _____ grade level _____ section _____
 Name of data collector _____

No	Questions	Response
1. 1	Age of the respondent	_____
1. 2	Sex of the respondent	1. Male 2. Female
1. 3	Religion	1. Orthodox 4. Catholic 2. Protestant 5. other 3. Muslim
1.4	School type	1. Private 2. Public
1.5	Grade	1. 9 3. 11 2. 10 4. 12
1. 6	What is your father’s educational status?	1. No formal education 3. Secondary (9-12) 2. Primary (1-8) 4. College or above
1. 7	What is your mother’s educational status?	1. No formal education 3. Secondary (9-12) 2. Primary (1-8) 4. College or above
1.8	Height	In centimeters _____
1.9	Weight	In kilogram (kg) _____
1.10	BMI	
1.11	BMI for age	

Part II: - Social Media Usage Question

S. No	Question	Strongly disagree (1)	Dis-agree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
	Media pressure: Answer the following questions (2.1-2.4) on the media (including TV, magazines, the internet, movies, and advertisements) using the pertinent information.					
2.1	I feel pressure from the media to look thinner					
2.2	I feel pressure from the media to look in better shape.					
2.3	I feel pressure from the media to improve my appearance					
2.4	I disliked my body appearance compared to my ideal body shape on social media					

Questionnaire adopted from (Schneider et al., 2013, Burnette et al., 2017, Schaefer et al., 2015b)

Part III:- The following questions assess family and Peer influences

After reading the following questions carefully, mark your choice with ✓

S.no	Question	Strongly disagree (1)	Dis-agree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
	Parental pressure: Answer the following questions (3.1-3.4) by providing pertinent details about your family (including your parents, siblings, and other relatives).					
3.1	I feel pressure from family members to look thinner					
3.2	Family members encourage me to get in better shape					
3.3	I feel pressure from family members to improve my appearance					
3.4	Family members encourage me to decrease my level of body fat					
	Peer pressure: Answer the following questions (3.5-3.8) about your peers with pertinent details (including close friends, classmates from school, and other social contacts).					
3.5	My peers encouraged me to get thinner					
3.6	I feel pressure from my peers to improve my appearance					
3.7	I feel pressure from my peers to look in better shape					
3.8	I get pressure from my peers to decrease my level of body fat					

Adapted from (Ievers-Landis et al., 2019)

Part IV: - Physical Exercise

4.1 How intensely do you usually exercise physically?

1.1 Level 1: Sedentary activities (e.g. watching movies, playing video games, etc.)

1.2 Level 2: light activities (e.g. Writing, drawing, walking, etc.)

1.3 Level 3: Moderate activities (e.g. dancing, cycling, running, table tennis)

1.4 Level 4: vigorous activities (e.g. running, swimming, volleyball, football, etc.)

1.5 Level 5: very vigorous activity (e.g. sprinting, weight lifting, intense sports, etc.)

4.2 How many minutes do you usually engage in the above-intensity physical activity?

2.1 10 minutes or less

2.2 11 to 20 minutes

2.3 21 minutes to 30 minutes

2.4 31 minutes to 59 minutes

2.5 60 minutes or more

4.3 How many times do you usually engage in the above physical activities?

3.1 Less than 1 time a month

3.2 2-3 times a month

3.3 1-2 times a week

3.4 3-5 times a week

3.5 Approximately 1 times a day

Part v:- Body Shape Questionnaire

How have you been feeling about your appearance over the **LAST FOUR WEEKS**?
Please consider each question and mark the corresponding number on the right. Kindly respond to each inquiry.

OVER THE PAST FOUR WEEKS:

S.no	Question	Never	Rarely	Sometimes	Often	Very often	Always
5.1	Have you felt your body is unattractive?	1	2	3	4	5	6
5.2	Have you felt ashamed of your body?	1	2	3	4	5	6
5.3	Have you avoided places where others could see your body, such as public restrooms or swimming pools?	1	2	3	4	5	6
5.4	Have you tried to avoid wearing clothing that draws attention to the shape of your body?	1	2	3	4	5	6
5.5	Have you ever felt that your bottom, hips, or legs were too big for your picture?	1	2	3	4	5	6
5.6	Have you been afraid that you might become fat (or fatter)?	1	2	3	4	5	6
5.7	Have you ever felt fat while being exposed or while having a bath?	1	2	3	4	5	6
5.8	Have you felt you have to get fatter	1	2	3	4	5	6
5.9	Have you ever felt it is not fair that you are extremely thin and skinny compared to other people	1	2	3	4	5	6
5.10	Have you ever compared your shape negatively to other friend's shapes after observing them	1	2	3	4	5	6
5.11	Have you ever considered that the reason you are in your current condition is that you lack self-control?	1	2	3	4	5	6

5.12	Have you ever felt so ashamed of your appearance and cried?	1	2	3	4	5	6
5.13	Do you believe that you need to diet because you're so concerned about your appearance?	1	2	3	4	5	6
5.14	Has stress over your appearance influenced you to diet?	1	2	3	4	5	6

Part VI: - Self-esteem

Instructions: Below is a list of statements dealing with your general feelings about yourself. Please

Indicate how strongly you agree or disagree with each statement

S.No	Statement	Strongly disagree(0)	Disagree(1)	Agree(2)	Strongly agree(3)
6.1	I feel that I am a person of worth, at least on an equal plane with others	0	1	2	3
6.2	I feel that I have a number of good qualities	0	1	2	3
6.3	All in all, I am inclined to feel that I am a failure				
6.4	I am able to do things as well as most other people	0	1	2	3
6.5	I feel I do not have much to be proud of				
6.6	I take a positive attitude toward myself	0	1	2	3
6.7	On the whole, I am satisfied with myself	0	1	2	3
6.8	I wish I could have more respect for myself	3	2	1	0
6.9	I certainly feel useless at times.	3	2	1	0
6.10	At times I think I am no good at all	3	2	1	0

Part VII:- Over the last 2 weeks, how often have you been bothered by any of the following problems?

S.no	Problems	Not at all	Several days	More than half the days	Nearly every day
7.1	Little interest or pleasure in doing things	0	1	2	3
7.2	Feeling down, depressed, or hopeless	0	1	2	3
7.3	Trouble falling or staying asleep, or sleeping too much	0	1	2	3
7.4	Feeling tired or having little energy	0	1	2	3
7.5	Poor appetite or overeating	0	1	2	3
7.6	Feeling bad about yourself or that you are a failure or have let yourself or your family down	0	1	2	3
7.7	Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
7.8	Moving or speaking so slowly that other people could have noticed Or the opposite being so restless that you have been moving around a lot more than usual	0	1	2	3

ANNEX IV: Amharic version Questionnaire

ክፍል I:- መሰረታዊ መረጃን የተመለከቱ ጥያቄዎች

የመጠይቁ መለያ ቁጥር. _____ የትምህርት ቤት ስም _____ የክፍል ደረጃ _____ ክፍል _____

የመረጃ ሰብሳቢው ስም _____

የሚከተሉትን ጥያቄዎች በጥንቃቄ ካነበቡ በኋላ ለእያንዳንዱ በተሰጠው የመልስ መስጫ ቦታ መልሱን ያክቡ

ተ. ቁ	ጥያቄ	መልስ
1.1	የምላሽ ሰጪው ዕድሜ	_____
1.2	የምላሽ ሰጪው ጾታ	ወንድ 2. ሴት
1.3	ሃይማኖት	አርቶዶክስ 3. ሙስሊም 5. ሌላ ፕሮቴስታንት 4. ካቶሊክ
1.4	የትምህርት ቤቱ ዓይነት	የመንግስት 2. የግል
1.5	የክፍል ደረጃ	9ኛ 3. 11ኛ 10ኛ 4. 12ኛ
1.6	የአባትዎ የትምህርት ሁኔታ ምንድን ነው?	መደበኛ ትምህርት የለም 3. ሁለተኛ ደረጃ (9-12) የመጃመሪያ ደረጃ (1-8) 4. ኮሌጅ ወይም በላይ
1.7	የእናትዎ የትምህርት ደረጃ ምንድን ነው?	መደበኛ ትምህርት የለም 3. ሁለተኛ ደረጃ (9-12) የመጃመሪያ ደረጃ (1-8) 4. ኮሌጅ ወይም በላይ
1.8	ቁመት	በ ሴንቲሜትር _____
1.9	ክብደት	በ ኪሎግራም _____
1.10	BMI	
1.11	BMI ለዕድሜ	

ክፍል II:- የሚከተሉትን ጥያቄዎች በጥንቃቄ ካነበቡ በኋላ ምርጫዎን በ ✓ ምልክት ያስቀምጡ

ተ ቁ	ጥያቄ	በጣም አልሰማም (1)	አልሰማም (2)	አልሰማም ወይም አልቃውምም (3)	አስማማለሁ (4)	በጣም አስማማለሁ (5)
	የሚዲያ ግፊት: አስፈላጊውን መረጃ በመጠቀም በመገናኛ ብዙሃን (ቴሌቪዥን፣ መጽሔቶች፣ ኢንተርኔት፣ ፊልሞች እና ማስታወቂያዎችን ጨምሮ) የሚከተሉትን ጥያቄዎች (2.1-2.4) ይመልሱ።					
2.1	ቀጭን እንድመስል ከሚዲያ ግፊት ይሰማኛል					
2.2	በተሻለ ቅርፅ እንድታይ የሚዲያ ግፊት ይሰማኛል					
2.3	መልኬን ለማሻሻል ከሚዲያ ግፊት ይሰማኛል					
2.4	የሰውነቴን ገጽታ በማህበራዊ ሚዲያ ላይ ከምወደዉ ትክክለኛ የሰውነት ቅርጽ ጋር ሲነጻጸር አልወደዉም					

ክፍል III:- የቤተሰብ እና የአቻ ተጽእኖ የሚገመገሙ ጥያቄዎች

የሚከተሉትን ጥያቄዎች በጥንቃቄ ካነበቡ በኋላ የምርጫዎን ቁጥር ያክቡ።

ተ. ቁ	ጥያቄ	በጣም አልሰማም (1)	አልሰማም (2)	አልሰማም ወይም አልቃወምም (3)	አሰማለሁ (4)	በጣም አሰማለሁ (5)
	የቤተሰብ ግፊት: ስለቤተሰብ (የእርስዎን ወላጆች፣ ወንድሞች እና እህቶች እና ሌሎች ዘመዶችን ጨምሮ) ተገቢ ዝርዝሮችን በመስጠት የሚከተሉትን ጥያቄዎች (3.1-3.4) ይመልሱ።					
3.1	ከቤተሰብ አባላት ቀጭን እንድመስል ግፊት ይደረግብኛል	1	2	3	4	5
3.2	የቤተሰብ አባላት የተሻለ ቅርፅ እንድኖረኝ ያበረታቱኛል	1	2	3	4	5
3.3	ቁመናዬን እንዳሻሽል ከቤተሰቤ አባላት ግፊት ይሰማኛል	1	2	3	4	5
3.4	የቤተሰብ አባላት የሰውነት ስብ እንድቀንስ ያበረታቱኛል	1	2	3	4	5
	የጓደኛ ግፊት: ስለ እኩዮችህ (የቅርብ ጓደኞችን፣ የትምህርት ቤት ተማሪዎችን እና ሌሎች ማህበራዊ ግንኙነቶችን ጨምሮ) የሚከተሉትን ጥያቄዎች (3.5-3.8) መልስ ሰጣቸው።					
3.5	ጓደኞቼ ይበልጥ ቀጭን እንድሆን ያበረታቱኛል	1	2	3	4	5
3.6	ቁመናዬን እንዳሻሽል ከእኩዮቼ ግፊት ይሰማኛል	1	2	3	4	5
3.7	የተሻለ ቅርፅ እንድኖረኝ ከእኩዮቼ ግፊት ይሰማኛል	1	2	3	4	5
3.8	የሰውነት ስብ እንድቀንስ ከእኩዮቼ ግፊት ይደርስብኛል	1	2	3	4	5

ክፍል IV:- አካላዊ እንቅስቃሴን የሚገመገሙ ጥያቄዎች

4.1 ብዙውን ጊዜ የአካል ብቃት እንቅስቃሴ የሚያደርጉት ምን ያህል ነው?

ደረጃ 1: እንቅስቃሴ የሌለው ድርግት (ለምሳሌ: ፊልሞችን መመልከት፣ ጌም መጫወት፣ ወዘተ.)

ደረጃ 2: ቀላል እንቅስቃሴዎች (ለምሳሌ መጻፍ፣ መሳል፣ መራመድ፣ ወዘተ.)

ደረጃ 3: መጠነኛ እንቅስቃሴዎች (ለምሳሌ: ዳንስ፣ ብስክሌት መንዳት፣ ፋጫ፣ የጠረጴዛ ቴኒስ)

ደረጃ 4: ኃይለኛ እንቅስቃሴዎች (ለምሳሌ ፋጫ፣ ዋና፣ መረብ ኳስ፣ እግር ኳስ ወዘተ.)

ደረጃ 5: በጣም ኃይለኛ እንቅስቃሴ (ለምሳሌ ስፕሪንግ፣ ከብደት ማንሳት፣ ኃይለኛ ስፖርቶች፣ ወዘተ.)

4.2 ከዚህ በላይ በተጠቀሰው የአካል ብቃት እንቅስቃሴ ውስጥ ለምን ያህል ደቂቃ ትሳተፋለህ

2.1 ለ 10 ደቂቃ ወይም ከዚያ ያነሰ

- 2.2 ከ 11 እስከ 20 ደቂቃዎች
- 2.3 ከ 21 ደቂቃ እስከ 30 ደቂቃ
- 2.4 ከ 31 ደቂቃ እስከ 59 ደቂቃ
- 2.5 60 ደቂቃ ወይም ከዚያ በላይ
- 4.3 ከላይ በተጠቀሱት የአካል ብቃት እንቅስቃሴዎች ውስጥ ምን ያህል ጊዜ ይሳተፋሉ?
 - 3.1 በወር ከ 1 ጊዜ ያነሰ
 - 3.2 በወር 2-3 ጊዜ
 - 3.3 በሳምንት 1-2 ጊዜ
 - 3.4 በሳምንት 3-5 ጊዜ
 - 3.5 በቀን 1 ጊዜ በግምት

ክፍል V:-የሰውነት ቅርጽ መጠይቅ

ባለፉት አራት ሳምንታት ውስጥ ስለ ገጽታዎ ምን ተሰማዎት? እባክዎ እያንዳንዱን ጥያቄ ግምት ውስጥ ያስገቡ እና በቀኝ በኩል ያለውን ተዛማጅ ቁጥር ያክቡ። ለእያንዳንዱ ጥያቄ በደግነት ምላሽ ይስጡ።

ባለፉት አራት ሳምንታት:-

ተ.ቁ	ጥያቄ	በጭራሽ	አልፎ አልፎ	አንዳንድ	ብዙ ጊዜ	በተደጋጋሚ	ሁሌም
5.1	ሰውነትዎ የማይሰብ እንደሆነ ተሰምትዎት ያውቃሉ?	1	2	3	4	5	6
5.2	በሰውነትዎ አፍረው ያውቃሉ?	1	2	3	4	5	6
5.3	ሌሎች ሰዎች ሰውነትዎን የሚያዩባቸውን ቦታዎችን እንደ የሕዝብ መዝናኛ ቤቶች ወይም የመዋኛ ገንዳዎች ያሉትን አስወግደዋል?	1	2	3	4	5	6
5.4	ትኩረትን ወደ ሰውነትዎ ቅርጽ የሚሰጡ ልብሶችን ላለመልበስ ሞክረዋል?	1	2	3	4	5	6
5.5	ከ ወገብ በታች፣ እግሮችህ ወይም ዳሌህ ለሥዕልህ በጣም ትልቅ እንደሆኑ ተሰምቶህ ያውቃል?	1	2	3	4	5	6
5.6	ወፍራም እሆናለሁ ብለው ፈርተው ያውቃሉ?	1	2	3	4	5	6
5.7	በተጋለጡበት ወቅት ወይም ገላዎን በሚታጠቡበት ጊዜ ወፍራም ሆኖ ተሰምቶዎት ያውቃል?	1	2	3	4	5	6
5.8	መደፈር እንዳለበዎት ተሰምቶት ያውቃል?	1	2	3	4	5	6
5.9	ከሌሎች ሰዎች ጋር ሲወዳደር በጣም ቀጭን እና ቀጭን መሆንዎ ፍትሃዊ እንዳልሆነ ተሰምቶዎት ያውቃሉ?	1	2	3	4	5	6
5.10	የእርስዎን ቅርጽ የሌሎች ጓደኞችን ቅርጽ ከተመለከቷቸው በኋላ በአሉታዊ መልኩ አወዳድረው ያውቃሉ?	1	2	3	4	5	6
5.11	አሁን ላሉበት ሁኔታ ምክንያቱ ራስዎን ያለመቆጣጠር እንደሆነ አስበህ ታውቃለህ?	1	2	3	4	5	6

5.12	በመልክዎ በጣም አፍረዉ አልቅሰዉ ያውቃሉ?	1	2	3	4	5	6
5.13	ስለ መልክዎ በጣም ስለሚያሳስብዎት አመጋገብዎን ማሰታካከል ያስፈልግዎታል ብለው ያምናሉ?	1	2	3	4	5	6
5.14	በውጫዊ ገጽታዎ ላይ ያለዎት ጭንቀት በአመጋገብ ላይ ተጽዕኖ አሳድሯል?	1	2	3	4	5	6

ክፍል VI:- በራስ መተማመን (Self-esteem) መጠን የሚገመገሙ ጥያቄዎች

ከዚህ በታች ስለራስዎ ያለዎትን አጠቃላይ ስሜት የሚመለከቱ መግለጫዎች ዝርዝር ነው።

አባክዎ በእያንዳንዱ መግለጫ ምን ያህል እንደሚስማሙ ወይም እንደማይስማሙ ያመልክቱ

ተ ቁ	መግለጫ	በጣም አልስማማም	አልስማማም	አስማማለሁ	በጣም አስማማለሁ
6.1	እኔ ዋጋ ያለኝ ሰው እንደሆንኩ ይሰማኛል፣ ቢያንስ ከሌሎች ጋር እኩል እንደሆንኩሁ	0	1	2	3
6.2	በርካታ ጥሩ ባሕርያት እንዳሉኝ ይሰማኛል	0	1	2	3
6.3	ባጠቃላይ እኔ ዋጋ የሌለኝ እንደሆንኩ ይሰማኛል	3	2	1	0
6.4	እኔም እንደ ሌሎች ሰዎች ብዙ ነገሮችን ማድረግ እችላለሁ	0	1	2	3
6.5	የምኮራበት ብዙ ነገር እንደሌለኝ ይሰማኛል	3	2	1	0
6.6	ለራሴ አዎንታዊ አመለካከት አለኝ	0	1	2	3
6.7	በአጠቃላይ በራሴ ረክቻለሁ	0	1	2	3
6.8	ለራሴ የበለጠ ክብር እንዲኖረኝ እመኛለሁ	3	2	1	0
6.9	በእርግጠኝነት አንዳንድ ጊዜ ምንም ጥቅም እንደሌለኝ ይሰማኛል	3	2	1	0
6.10	በእርግጠኝነት አንዳንድ ጊዜ ምንም ጥቅም እንደሌለኝ ይሰማኛል	3	2	1	0

ክፍል VII:- ባለፉት 2 ሳምንታት ምን ያህል ጊዜ በሚከተሉት ችግሮች ተጨንቀው ነበር?

ተ.ቁ	ችግሮች	የላም	ብዙ ቀናት	ከግማሽ ቀናት በላይ	በየቀኑ ማለት ይቻላል
7.1	ነገሮችን ለመስራት ፍላጎት ወይም እርካታ ማጣት	0	1	2	3
7.2	የጭንቀት ወይም የተስፋ መቁረጥ ስሜት መስማት	0	1	2	3
7.3	የመተኛት ችግር፣ ወይም ትኝቶ ያላመቆየት ወይም ብዙ መተኛት	0	1	2	3
7.4	የድካም ወይም ጉልበት የማጣት ስሜት መስማት	0	1	2	3
7.5	የምግብ ፍላጎት ማጣት ወይም ከመጠን በላይ መብላት	0	1	2	3
7.6	ስለራስዎ መጥፎ ስሜት፣ ለራስዎ ወይም ለቤተሰብዎ ውድቀት ምክንያት እንደሆኑ መስማት	0	1	2	3
7.7	ነገሮች ላይ ያላማተኮር ችግር፣ እንደ ማንበብ፣ ቴሌቪዥን መመልከት፣ ጋዜጣ ማንበብ ላይ	0	1	2	3
7.8	በጣም በቀስታ መንቀሳቀስ ወይም መናገር ወይም በተቃራኒው ሰው እስካስተውል ያላእረፍት ከወትሮው በበለጠ መንቀሳቀስ	0	1	2	3
7.9	ብትሞት ይሻልሃል ወይም እራስህን ብትጎዳ ይሻልሃል የሚል ሀሳብ	0	1	2	3