# Aggressive Behavior among Adolescent Students across Socio-Demographic Groups: Evidence from Debre Markos Town

Temesgen Demissie Eijigu
Department of Psychology, Debre Markos University, Ethiopia
Email: Temesgen_Demissie@dmu.edu.et/ temesgendem@yahoo.com

**Abstract**

*The study aimed to investigate aggressive behavior among adolescent students across socio-demographic groups in Debre Markos Town. In this study, 332 students who were selected using stratified random sampling procedure from primary schools in Debre Markos Town participated. The instrument used in collecting data was a self-report questionnaire. Percentage, mean, standard deviation, correlation, and independent sample t-test were used for analyzing data. The finding indicated that verbal aggression followed by physical and indirect aggression was found as the form of aggressive behavior exercised by adolescents in the school. The finding also reported that parents' educational background and household income level were significantly negatively associated with adolescents' aggression. The t-test revealed the existence of statistically significant differences between male and female adolescents in all forms of aggressive behavior in favor of males. The study concluded that lower levels of parental education and income and being male are linked to higher rates of adolescent aggression. Therefore, interventions should focus on parents with lower educational backgrounds and income levels. These programs should aim to help parents to attain their education and increase their income through various means. Additionally, it is important to be gender sensitive when tackling adolescent aggression.*

***Keywords:*** *Aggression, socio-demographic, Adolescent, Aggressive behavior*

## Introduction

Violence and aggression are significant global issues. According to the World Health Organization (WHO, 2020), an estimated one billion children—approximately one in two worldwide—experience some form of violence each year. Among children aged 11 to 15, one in three students reported being bullied in the past month, and a similar proportion of students aged 13 to 15 admitted to participating in physical fights. Additionally, around 120 million young women and girls under the age of 20 have faced some form of forced sexual experience.

The long-term consequences of violence and aggression are profound. WHO (2020) reports that students aged 11 to 15 who experience bullying are 13% less likely to graduate compared to their peers. Furthermore, these students are 30 times more likely to attempt suicide. Adults who have faced four or more Adverse Childhood Experiences—such as physical, sexual, or emotional abuse—are seven times more likely to be involved in interpersonal violence, whether as perpetrators or victims. Additionally, individuals who experienced physical or sexual violence during childhood are 14 times and 16 times more likely, respectively, to commit intimate partner violence in adulthood. The report also revealed that the impact of violence against children goes beyond individuals; it carries significant economic implications as well. In the United States, violence against children is estimated to cost approximately $228 billion annually. In South Africa, around $13.5 billion is spent each year on various forms of violence against children.

These large figures on the prevalence and consequences of aggression highlight the urgent need for identifying contributing factors for aggression and designing intervention mechanisms.

Despite the significant magnitude of the problem and extensive research conducted in the area, there is no universally agreed-upon definition of aggression. For instance, Buss (1961, cited in Feldman, 1985) defined aggression as any behavior that harms or injures another person. However, other researchers, such as Berkowitz (1974, cited in Feldman, 1985) and Bjorkqvist and Niemela (1992, cited in Franzoi, 2000), and Hetherington and Parke (1993) disagree with Buss's definition. They argue that the intent behind a person's actions must be considered before determining whether a particular behavior is aggressive (Feldman, 1985).

The most commonly used definition of aggression by social psychologists is given by Bjorkvist and Niemela (1992, cited in Franzoi, 2000) which states that any kind of behavior that is intended to hurt or injure another person, or an object. This definition aligns with Vestal et al.'s (1999, cited in Adugna, 2005) definition as behaviors that intentionally inflict harm to other persons or property.

Researchers also do not agree on the forms of aggression. Geen (cited in Franzoi, 2000) categorized aggression into two types, namely, instrumental and hostile. Instrumental aggression refers to using aggression as an instrument to achieve goals (Papalia et al., 1999; Franzoi, 2000). On the other hand, hostile aggression is defined as an action intended to hurt another person (e.g., Papalia et al., 1999). It is stimulated

by anger, and its goal is to intentionally harm perpetrators or simply to cause injury or death to the victim (Franzoi, 2000).

Other research groups (e.g., Bjorkqvist et al., 1992; Osterman et al., 1994; Bjorkqvist et al., 2001) have classified aggression into three types: direct physical aggression, direct verbal aggression, and indirect aggression. Direct physical aggression is an action that inflicts harm by employing physical means such as hitting, kicking, tripping, shoving, and taking things from others, pushing, pulling, pinching, slapping, and throwing objects. On the other hand, direct verbal aggression refers to frightening or injuring the victim psychologically by using verbal threats, such as insulting, nicknaming, teasing, blaming, name-calling, yelling, and threatening. Finally, indirect aggression occurs when the target is attacked not directly, but circuitously through social manipulation. The aggressor manipulates other individuals to attack the victim, whereby the aggressor attempts to remain unidentified and thus avoid counterattack. Typical examples are backbiting, gossiping, ignoring, revealing someone's secrets, and other forms of social manipulation. Therefore, this research used the second group of researchers' definitions since it is easier to measure and widely used in empirical studies of developing countries (Bibire et al., 2023; Fayso, 2019; Kishore et al., 2019; Getachew & Sintayehu, 2007).

Aggression is one of the most serious social problems among adolescents (Yang, 2002). To assess the problem of school bullying and aggression, survey research was conducted in primary and secondary schools. A study in UK in 1990 has shown that 12 and 16 percent of the participants respectively reported sometimes or more frequently taking part in bullying others (Smith & Sharp, 1994).

Kishore et al. (2019) conducted a study on aggressive behaviors among students in India from grades 9 to 12. The findings revealed that a significant number of students exhibited various forms of aggression. Specifically, 47.1% of the students reported being involved in teasing, 58.9% disclosed that they shared information about other kids to make others laugh, 29.5% admitted slapping or kicking classmates, 38.7% called their peers derogatory names, and 26.7% threatened to hurt or hit someone more than once in the past week. A similar study investigated aggressive behavior among secondary school students in Nigeria (Bibire et al., 2023). The results showed that 56.9% of participants reported high levels of aggression, while 35.5% reported moderate levels of aggression.

Some studies on aggressive behavior and related issues have been conducted in various regions of Ethiopia. These include research in the Meskan Woreda of the Gurage Zone (Fayso, 2019), Addis Ababa (Eshetu, 2014; Wondimu, 1998), Jimma Zone (Getachew & Sintayehu, 2007), and five woredas in the East Gojjam Zone (Eijigu, 2020). For example, Windom's (1998) study found that over half of the participants in secondary schools in Addis Ababa reported engaging in aggressive behaviors. Additionally, Getachew and Sintayehu (2007) revealed that indirect aggression, followed by verbal and physical aggression, is prevalent among secondary school students in Jimma Zone. Overall, these findings highlight the significant prevalence of aggression in secondary schools across Ethiopia.

Various theoretical frameworks are available to explain the causes of adolescents' aggressive behaviors. Some theorists hold the view that much of humans' aggressiveness is innate. For example, Freud and Lorenz stated aggression as characteristic of human nature or is an inherited adaptive mechanism of species to survive (Feldman, 1985). These theoreticians highly emphasized the role of nature over environmental factors to determine aggressive behavior. Some researchers argued that aggression as a reaction to frustration (Dollard et al., 1939/1970). A third theoretical approach focuses on learning mechanisms. According to this perspective, aggressive behavior is primarily a learned behavior through observing and imitation of others' actions, and secondly through direct reinforcement of the specific aggressive actions demonstrated (Feldman, 1985; Franzoi, 2000).

Some empirical evidences show the role of socio-demographic factors in the development of aggressive behaviors. For instance, Hotton's (2001) study reported that approximately 30 % of children living in families with low income were identified as having an aggressive behavior problem compared with 18% of children in higher income families. Similarly, Orpinas et al. (1999) observed that students who lived with both parents had significantly lower aggression scores than students who lived in other arrangements. Dodge et al. (1994) also reported a statistically significant negative association between socio-economic status (measured through educational background, income level, and occupation) and peer-nominated aggression.

Regarding gender differences in aggression, Maccoby and Jacklin (1974, cited in Santrock, 2000) stated that males are more aggressive than females in all cultures starting from two years of age. Similarly, Bjorkqvist et al. (2001) reported that boys scored higher in all forms of aggression, i.e., physical, verbal, and indirect aggression than girls. Moreover, though gender difference was slight, in junior/middle and

secondary schools, boys exercised bullying and being bullied considerably more than girls (Smith & Sharp, 1994).

A study by Wondimu (1998) found a similar result that is more boys than girls hit or slap someone, use vulgar language, destroy someone's property, have a physical fight with someone, kiss someone by force, and threaten to hurt someone. In contrast, Papalia et al. (1999) demonstrated that boys and girls differ in ways of expressing aggression. Boys do show more physical aggression (e.g., Adugna, 2005; Bjorkqvist et al., 1992; Osterman et al., 1994) while girls exhibit more complex and subtle types of aggression, namely indirect aggression or psychological aggression (e.g., Adugna, 2005; Bjorkqvist et al., 1992). Concerning verbal aggression, Adugna (2005), Tavris (1989, cited in Franzoi, 2000), and Bjorkqvist et al. (1992) pointed out that the two sexes usually do not differ significantly from each other with respect to direct verbal aggression and expression of anger.

Concerning age, Bjorkqvist et al. (1992) proposed how aggressive behavior develops sequentially across age by pursuing the order of direct physical, direct verbal and indirect aggression. Concerning the procedures of development, they suggested that as age increases, gross aggressive techniques are gradually replaced by more refined ones. Young children, who lack verbal skills, have a choice of physical aggression such as hitting, kicking, biting, and pushing. At the time verbal ability develops, allowing for verbal threats, shouting, and other forms of direct verbal aggression. The development of social intelligence and skills makes a third style and stage appears. Since girls develop faster than boys in terms of social intelligence, indirect aggression is likely to emerge at an earlier stage. At the time the required skills developed, both sexes replace physical aggression by verbal and indirect forms. Consistent with the above assumptions, Hotton (2003); Hetherington and Parke (1993) found that aggression starts in early life of childhood and continues throughout adolescence. Particularly, physical aggression is more common among younger children. For most children, these problems decline with age and older children show more verbal aggression.

In contrast, Sharma and Sandhu (2006) found that boys and older children (12-14 years) had higher scores on aggression in comparison to girls and younger children (6-8 years), respectively.

Considering the high prevalence of adolescents' aggression, it demands search for contributing factors. In order to contribute some to resolve or reduce adolescents' aggression, it is necessary to examine different domains of influence such as family

structures, peers, neighbors, etc. Thus, this study aimed to investigate the aggressive behavior among adolescents across socio-demographic groups at Debre Markos Town.

**Statement of the problem**

Few local studies in Ethiopia indicated that aggression is prevalent across the country. For instance, Wondimu (1998) reported that over 50% of the respondents in Addis Ababa secondary schools have taken part in some forms of aggressive behavior such as using a stick or rock to hit someone, kicking, shoving, and physical fighting. A recent related study estimated 15.5% prevalence of bullying in five towns within the East Gojjam Administrative Zone (Eijigu, 2020), 27.4% prevalence in several Young Lives study sites in Ethiopia (Nguyen et al., 2020). Besides, a study of 971 adolescents (475 females and 496 males) showed that 15% of 15-year-old adolescents experienced indirect bullying, 14.2% experienced verbal bullying, 10.5% experienced property damage, and 5.4% experienced physical bullying (Pells et al., 2016).

The issue of aggression appears to be widespread, and its severity is believed to be particularly high in Ethiopia. However, there has been no adequate research on this topic. While some studies on aggression have been conducted, such as those in the Meskan Woreda of the Gurage Zone (Fayso, 2019), in Addis Ababa (Eshetu, 2014; Wondimu, 1998), and in Jimma Zone (Getachew & Sintayehu's, 2007), they have not adequately examined socio-demographic factors like family structure, parental education levels, and income. Moreover, researchers have not focused enough on adolescent aggression; instead, they tend to concentrate more on bullying (Eijigu, 2020; Pells et al., 2016; Nguyen et al., 2020).

Besides, the available evidence on the influence of socio-demographic factors on adolescent aggression is inconsistent. Some studies (e.g., Bjorkqvist et al., 2001) found that boys scored higher than girls in all forms of aggression. Papalia et al. (1999) demonstrated that boys do show more physical aggression (e.g., Adugna, 2005; Bjorkqvist et al., 1992; Osterman et al., 1994) while girls exhibit more complex and subtle types of aggression, namely indirect aggression or psychological aggression (e.g., Adugna, 2005; Bjorkqvist et al., 1992). Other studies (e.g., Adugna, 2005; Tavris, 1989 cited in Franzoi, 2000; Bjorkqvist et al., 1992) pointed out that the two genders usually do not differ significantly from each other with respect to direct verbal aggression and expression of anger.

Family, being the primary and most important agent of socialization is believed to be associated with the aggressive behavior of adolescents manifested in the school setting. However, the researcher couldn't find adequate local literature showing a clear picture of aggressive behavior among adolescents across socio-demographic groups at Debre Markos town.

To closely examine the problem, the following basic research questions were posed:

1. Which forms of aggression are prevalent among adolescent students in Debre Markos Town?
2. Is there a relationship between socio-demographic factors (e.g., parental educational background and income level) and adolescents' aggressive behavior?
3. Is there a statistically significant difference in forms of aggression among adolescents (physical, verbal, and indirect) across age, sex, and family structure?

## Methods

This study is delimited only to examine aggressive behavior among adolescents across socio-demographic groups such as age, sex, family structure parental educational background, and income level. Besides, the study is conducted in government primary schools in particular reference to seventh and eighth-grade students at Debre Markos Town. In this study, adolescents are all grade seven and eight students in Debre Markos primary schools within the age range of 12-18 years.

### Approach and Design of the Study

The study was designed to investigate aggressive behavior among adolescents across socio-demographic groups at Debre Markos Town. To conduct the study, a quantitative approach has been followed. This approach is used for quantifying the opinion of larger number of pupils to a limited set of questions, thus facilitating the statistical aggregation of data. The researcher employed a cross-sectional survey design.

### Population

The target population of this study were seventh and eighth-grade students of government primary schools at Debre Markos Town. The town was selected as a study site since it was the researcher's working and residence area where he is familiar with the culture and language of the society.

Seventh and eighth-grade students were selected since students in those grades are found in the stage of both early and middle adolescence. Hence, comparison of the two stages would be possible.

**Sample and Sampling Techniques**

Student participants for self-report questionnaire were selected from six primary schools: Teklehaimanot, Dibeza, Abema, Endemata, Delbetigle, and Editebeb Primary schools. Out of 3210 (1660 males and 1550 females) students were attending their education in those schools in 2006/2007 academic year. Then, 346 students were selected from both grade seven and eight by using stratified random sampling procedures. The bases of stratification were grade level and sex of students. This sample size determination was based on Krejcie and Morgan (1970) recommendation on sample size determination for research activities.

**Table 1: Grade level and gender distribution of student participants**

| Grade Level | Gender Distribution | | |
|---|---|---|---|
| | Male | Female | Total |
| 7 | 85 | 79 | 164 |
| 8 | 87 | 81 | 168 |
| Total | 172 | 160 | 332 |

In grade seven, there were 1568(818 males and 750 females) students, and in grade eight, there were 1642(842 males and 800 females) students. By considering their numbers in the respective grade level and sex, participants were selected in proportion to their representation in the population. Accordingly, the size of the sample was determined, that is from grade seven 169 (88 males and 81 females) students, and from grade eight 177 (91 males and 86 females) students. Then, numbers were assigned to each student in their respective sex at each grade level. Finally, from each sub-group, a given number of participants were selected independently by using a lottery system. Totally, 346 students were involved for the main study. However, some participants failed to complete the instrument appropriately. These were a total of fourteen participants and excluded from the analysis. Therefore, the analysis was based on the data obtained from 332 respondents who properly filled in the set of questionnaires.

**Instruments**

To collect the required data, self-report questionnaire was employed. The first set consisted of seven items concerning demographic characteristics of the respondents. The second part comprised of 34 items that measure aggressive behavior (verbal, physical, and indirect aggression) of adolescents.

**Measures on Demographic Characteristics**

In this section, all respondents provided information regarding their age, sex, and grade level, family structure, and the highest level of education completed by each parent/ guardian residing with them, and monthly household income. Students' sex was coded as female=0 and male=1.

Age was dichotomized into two groups, which are 12-14 years and 15-18 years. This classification is in line with Steinberg's (1993) classification by citing studies of Kagan and Colesv (1972); Keniston (1970); and Lipsitz (1977). These are early adolescence, which covers the period from about age 11 through age 14, and middle adolescence from about age 15 through age 18. Hence, 12-14 years coded as 0, and 15-18 years coded as 1.

Family structure was limited to two groups. These are intact and non-intact families. Intact families were those families in which both biological parents still resided in the home with the respondent. Non-intact families encompassed all other living situations, including a single parent alone, living with one biological parent and a step parent, living with grandparents or adults. Thus, intact was coded as 0 and non-intact was coded as 1. Parental education was coded as a four-level variable, these are illiterate = 0; primary school (grades 1-8) = 1; secondary school education (9-12) =2, and post-secondary education=3. Income was measured by self-report on an estimated monthly household income.

**Measures on Aggressive Behaviors**

The items included in the scale measure different forms of aggressive behaviors (verbal, physical, and indirect aggression) of adolescents. The items were adapted mainly from Bjorkqvist et al. (19992) Direct and Indirect Aggression Scale (DIAS), and Kingery's (1998) Adolescents' Violence Scale discussed in Wondimu (1998) study on interpersonal violence in Addis Ababa secondary schools. Some items were also included from the experiences of the researcher. The instrument asked participants to indicate whether they had been showing aggressive behaviors (e.g.,

insulting, fighting with peers, and backbiting) and its frequency in a seven-point Likert scale format in one month of reference time. The DIAS scale had three subscales: physical, verbal, and indirect aggression. The categories of the response were: once, twice, three to five times, six to ten times, eleven to twenty times, more than twenty times, and not happened in the last month, and labelled as 1, 2, 3, 4, 5, 6, and 0, respectively.

**Pilot Testing of the Instrument**

The main objective of the pilot test is to improve the instrument for data collection. Accordingly, the instrument for this study was formulated in English, translated into Amharic, the local language, and then back-translated by two English language professionals. Comparisons were made with the original version and modifications implemented to ensure equivalence in meaning between the English and Amharic versions. Four experts from the Department of Psychology in Addis Ababa University have evaluated the items' clarity, relevance and appropriateness in line with the purpose of the study. Based on their recommendations, some items were modified and phrased differently. Finally, the Amharic version of the instrument was piloted on randomly selected samples of 43(18 females and 25 males) students selected from grades seventh and eighth in Delbetigle Primary School in Debre Markos Town. The response of the respondents was scored and the internal consistency of the items on three subscales of aggressive behavior inventory items was computed by using Cronbach's Alpha. Cronbach's Alpha for each subscale was calculated with the help of SPSS version 20 for Windows. The reliability results of the scales are presented in Table 2.

**Table 2: Reliability Estimates of the Scales**

| Scale | Cronbach's Alpha |
|---|---|
| Physical Aggression | 0.80 |
| Verbal Aggression | 0.83 |
| Indirect Aggression | 0.92 |

Based on the results from the pilot test of the instrument, two items with low item-total correlation that could reduce the overall reliability of the instrument were removed, while other items were used for the final study with minor modifications. To state it differently, one item from verbal aggression scale (get into arguments when students disagree with me), and one item from physical aggression scale (scratched someone with nails) were removed.

### Procedures of Data Collection

Primarily, the researcher contacted school administrators and explained to them about the research he was going to conduct and its purpose. After obtaining the consent of administrators, information regarding the total number of students across sex and grade level was collected from the administrators' office. Then, the researcher determined the sample respondents for the pilot and final study. After completing the pilot testing, the final Amharic version of the questionnaire was administered to selected respondents in their classrooms at their respective schools. Before the administration of the questionnaire, the researcher explained the purpose of the questionnaire. He also provided instructions by reading aloud on how to fill out the questionnaire in order to avoid response bias because of poor reading and misunderstanding. Similarly, the researcher told the participants that their answers would be confidential and asked them to complete the questionnaire genuinely. They were also informed not to hesitate to ask any questions during the administration of the questionnaire. Following the explanation and instructions, the questionnaire was distributed to the respondents, and the researcher was available in close for individual assistance.

### Methods of Data Analysis

To describe the socio-demographic characteristics of the subjects and to show the prevalence of aggressive behaviors in schools, descriptive statistical methods such as mean, percentage, and standard deviation were employed. To check whether relationship exists between socio-demographic factors with adolescents' aggressive behavior in schools, if existent, to identify the magnitude and direction of the relationship, Pearson's Product-Moment Correlation Coefficient was used.

A t-test was also used to compare the mean score of students across gender, the two age categories (12-14 years and 15-18 years), and between students who came from intact and non-intact families. The level of significance was set at .05 for all statistical tests.

## Results

### Socio-demographic characteristics of participants

The socio-demographic characteristics of student samples who were involved in the self-report questionnaire are demonstrated in Table 3 below. To show their representation in each socio-demographic category, the percentage was calculated.

Mean and standard deviations are also computed for aggressive behaviors across socio-demographic variables.

**Table 3: Percentage, Mean, and SD for Aggression Scores on Socio-demographic Groups**

| Socio-demographic characteristics | Groups | N | % | Aggression Scores | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Physical | | Verbal | | Indirect | |
| | | | | M | SD | M | SD | M | SD |
| Gender | Female | 160 | 48.19 | 22.25 | 33.68 | 18.74 | 23.79 | 19.36 | 32.36 |
| | Male | 172 | 51.81 | 32.62 | 36.01 | 25.81 | 24.83 | 27.26 | 33.43 |
| | Total | 332 | 100 | 27.62 | 35.24 | 22.40 | 24.55 | 23.45 | 33.11 |
| Age in years | 12-14 | 180 | 54.22 | 27.31 | 34.93 | 22.13 | 23.36 | 20.54 | 30.07 |
| | 15-18 | 152 | 45.78 | 27.99 | 35.72 | 22.73 | 25.97 | 26.90 | 36.17 |
| | Total | 332 | 100 | 27.62 | 35.24 | 22.40 | 24.55 | 23.45 | 33.11 |
| Grade Level | 7 | 164 | 49.40 | 30.98 | 35.44 | 24.76 | 24.80 | 25.07 | 34.89 |
| | 8 | 168 | 50.60 | 24.35 | 34.84 | 20.11 | 24.16 | 21.88 | 31.29 |
| | Total | 332 | 100 | 27.62 | 35.24 | 22.40 | 24.55 | 23.45 | 33.11 |
| Family Structure | Intact | 190 | 57.23 | 28.96 | 36.35 | 23.40 | 26.14 | 25.42 | 34.84 |
| | Non-intact | 142 | 42.77 | 25.82 | 33.75 | 21.07 | 22.28 | 20.82 | 30.56 |
| | Total | 332 | 100 | 27.62 | 35.24 | 22.40 | 24.55 | 23.45 | 33.11 |
| Maternal Educational Level | Illiterate | 122 | 37.08 | 32.23 | 37.55 | 24.93 | 24.49 | 28.52 | 37.25 |
| | Grade 1-8 | 99 | 30.09 | 26.13 | 33.41 | 24.28 | 26.22 | 22.83 | 32.04 |
| | Grade 9-12 | 76 | 23.10 | 24.05 | 33.88 | 20.38 | 25.23 | 20.80 | 30.91 |
| | Post-Secondary | 32 | 9.73 | 19.88 | 32.02 | 11.44 | 13.54 | 11.34 | 18.55 |
| | Total | 329 | 100 | 27.30 | 35.08 | 22.37 | 24.61 | 23.35 | 33.09 |
| Paternal Educational Level | Illiterate | 72 | 28.92 | 34.08 | 40.00 | 24.93 | 24.49 | 28.52 | 37.25 |
| | Grade 1-8 | 74 | 29.72 | 30.41 | 35.66 | 24.28 | 26.22 | 22.83 | 32.04 |
| | Grade 9-12 | 54 | 21.69 | 28.98 | 32.14 | 20.38 | 25.23 | 20.80 | 30.91 |
| | Post-Secondary | 49 | 19.68 | 18.06 | 30.46 | 11.44 | 13.54 | 11.34 | 18.55 |
| | Total | 249 | 100 | 28.73 | 35.88 | 22.37 | 24.61 | 23.35 | 33.09 |

As shown in Table 3, out of the total 332 participants, 160(48.19%) were females and 172(51.81%) were males. Their age ranges from 12-18 years, where a little more than half are found in the age range of 12-14 years. The remaining 152(45.78%) were in the age group of 15-18 years.

With regard to their educational background, nearly an equal number of subjects were represented from grade level i.e., 164(49.40%) from grade seven and 168(50.60%)

from grade eight. Concerning their family background, the majority (57.23%) came from intact families, whereas 142(42.77%) came from non-intact families.

As far as the parents'/guardians' educational level is concerned, 122(37.08%) and 72(28.92%) came from illiterate mothers'/female guardians and fathers'/male guardians', respectively. In addition, 9.73% of mothers/female guardians and 19.68% of fathers/male guardians had post-secondary school education. This data shows that the number of illiterate mothers/female guardians surpassed that of illiterate fathers/male guardians. Besides, the percentage of fathers/male guardians having post-secondary education was slightly higher than mothers/female guardians.

**Forms and Prevalence of Adolescents' Aggression in Schools**

**Table 4: Forms and mean ranking of adolescents' aggressive behaviors**

| Types of Aggression | Mean | Rank |
|---|---|---|
| Verbal | 2.8 | 1st |
| Physical | 1.97 | 2nd |
| Indirect | 1.95 | 3rd |

By measuring three forms of aggressive behavior, namely physical, verbal, and indirect with 14, 8, and 12 items respectively, mean for each form of aggression were computed, and rankings were made for all forms of aggression scores. The data indicate that all types of aggression—verbal, physical, and indirect—are observed among adolescents in Debre Markos Town. In terms of magnitude, the results show that adolescents scored relatively high for verbal aggression (mean = 2.8), followed by physical aggression (mean = 1.97) and indirect aggression (mean = 1.95).

**The relationship between socio-demographic factors and Adolescents' Aggressive behavior**

The other intent of the study was to examine socio-demographic factors with adolescents' aggressive behavior. To achieve this goal, Pearson correlation coefficient was also computed, and the results are presented below.

**Table 5: Intercorrelations among socio-demographic factors and Aggression**

| No. | Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Gender | 1 | .000 | .030 | .029 | -.008 | -.075 | .021 | .147** | .144** | .119* |
| 2. | Grade Level | | 1 | .087 | .050 | .067 | .001 | .473** | -.094 | -.095 | -.048 |
| 3. | Family Structure | | | 1 | -.078 | .027 | -.086 | -.086 | -.044 | -.047 | -.069 |
| 4. | Monthly income | | | | 1 | .399** | .389** | -.006 | -.175** | -.141* | -.128* |
| 5. | Maternal Education | | | | | 1 | .736** | -.014 | -.116* | .145** | -.147** |
| 6. | Paternal Education | | | | | | 1 | -.021 | -.146* | -.123 | -.108 |
| 7. | Age level | | | | | | | 1 | .010 | .012 | .096 |
| 8. | Physical aggression | | | | | | | | 1 | .741** | .824** |
| 9. | Verbal aggression | | | | | | | | | 1 | .770** |
| 10. | Indirect aggression | | | | | | | | | | 1 |

Note: *P<.05, two tailed test; **P <.01, two tailed test.

As shown in Table 5, gender had a statistically significant relationship with physical (r=.147, p<.01), verbal (r=.144, p<.01), and indirect aggression (r=.119, p<.05). However, grade level, age, and family structure had no statistically significant relationship with all forms of aggression. In contrast, household income level, maternal/female guardian, and paternal/male guardian educational level had a significant relationship with students' physical aggression in the school (r=-.175, p<.01; r=-.116, p<.05; r=-.146, p<.05, respectively).

Similarly, household income level and maternal/female guardian educational level had a significant relationship with adolescents' verbal aggression (r=-.141, p<.05; r=-.145, p<.01), and indirect aggression in the school (r=-.128, p<.05; r=-.147, p<.01, respectively). Though it is not strong, the results indicated that adolescents' aggression was relatively higher among students who came from low-income and low-education parents than high-income and high-education parents.

**Gender Difference in Adolescents' Aggression**

The other objective of this study was to compare the mean scores of male and female students' physical, verbal, and indirect aggression. To attain this end, a t-test was computed and results are presented in the following Table.

**Table 6: Gender Differences in Mean Scores of Aggression**

| Variable | Groups | N | Mean | SD | SE | t | df |
|---|---|---|---|---|---|---|---|
| Physical | Female | 160 | 22.25 | 33.68 | 2.66 | -2.704* | 330 |
| Aggression | Male | 172 | 32.6163 | 36.01 | 2.74 | | |
| Verbal | Female | 160 | 18.74 | 23.79 | 1.88 | -2.643* | 330 |
| Aggression | Male | 172 | 25.81 | 24.83 | 1.89 | | |
| Indirect | Female | 160 | 19.36 | 32.36 | 2.56 | -2.185* | 330 |
| Aggression | Male | 172 | 27.26 | 32.43 | 2.55 | | |

Note: *p<.05, two tailed test

As indicated in Table 6, male students scored higher means than female students in all forms of aggression. In support of this, t-values revealed the significant difference in physical aggression (t(330) = -2.704, p<.05), verbal aggression(t(330) = -2.643, p<.05), and indirect aggression (t (330) = -2.185, p<.05) between female and male adolescents. That is, the average physical aggression score of boys (M=32.62, SD=36.01) was significantly different from that of girls (M=22.25, SD=33.68) in favor of boys. Similarly, the average verbal aggression score of boys (M=2581; SD=24.83) was significantly different from that of girls (M=18.74, SD=23.79 in favor of boys. The same was true for the mean indirect aggression scores.

**Age Level Difference in Adolescents' Aggression**

The study has also dealt with age level differences among two age categories, namely, 12-14 years and 15-18 years of adolescents. To make comparisons of the two age groups, t-test was computed and presented as follows:

**Table 7: Difference in the Mean Score of aggression as a function of age level**

| **Variables** | Age level | N | Mean | SD | SE | t | df |
|---|---|---|---|---|---|---|---|
| Physical | 12-14 | 180 | 27.31 | 34.93 | 2.60 | -.174 | 330 |
| Aggression | 15-18 | 152 | 27.99 | 35.72 | 2.90 | | |
| Verbal | 12-14 | 180 | 22.13 | 23.36 | 1.74 | -.222 | 330 |
| Aggression | 15-18 | 152 | 22.73 | 25.97 | 2.11 | | |
| Indirect | 12-14 | 180 | 20.54 | 30.07 | 2.24 | -1.749 | 330 |
| Aggression | 15-18 | 152 | 26.90 | 36.17 | 2.93 | | |

Note: p>.05, two tailed test

As depicted in Table 7, despite students with age group of 15-18 years having slightly higher aggression mean scores than the age group of 12-14 years, the t-test revealed

no significant differences among the two age groups in physical, verbal, and indirect aggression mean scores.

**Difference in the Mean Scores of Aggression as a function of family structure**

To check whether there exists aggression difference due to family structure or not, among adolescents who lived with both parents (intact family) and those who were in other living arrangements (non-intact family), t-test was employed.

**Table 8: Comparisons of intact and non-intact families on mean score of aggression**

| Variables | Groups | N | Mean | SD | SE | T | Df |
|---|---|---|---|---|---|---|---|
| Physical | Intact | 190 | 28.96 | 36.35 | 2.64 | .803 | 330 |
| Aggression | Non-Intact | 142 | 25.82 | 33.75 | 2.83 | | |
| Verbal | Intact | 190 | 23.40 | 26.14 | 1.90 | .855 | 330 |
| Aggression | Non-Intact | 142 | 21.07 | 22.28 | 1.87 | | |
| Indirect | Intact | 190 | 25.42 | 34.84 | 2.53 | 1.253 | 330 |
| Aggression | Non-Intact | 142 | 20.82 | 30.56 | 2.56 | | |

Note: p>.05, two tailed test

As shown in Table 8, there was no statistically significant difference between adolescents who were living with both parents and those who were in other living arrangements in all forms of aggression mean scores.

## Discussion

The purpose of the present study was to investigate the influence of socio-demographic factors on adolescents' aggressive behavior: physical, verbal, and indirect among seventh and eighth-grade students in Debre Markos Town.

**Forms and Prevalence of Aggression in Schools**

The study's findings indicated that three forms of aggression—verbal, physical, and indirect—were observed among adolescents in Debre Markos Town. Similarly, research conducted in the secondary schools of Meskan Woreda (Fayso, 2019) and Jimma Zone (Getachew & Sintayehu, 2007) also found that these three forms of aggression were prevalent among adolescents. Additionally, a study by Bibire et al. (2023) reported that hostility, along with physical, verbal, and indirect aggression, was common among secondary school students in Northwest Nigeria. Kishore et al. (2019) also demonstrated that most school-going children scored high on aggression scales.

Regarding the extent of aggression, the findings showed that adolescents in Debre Markos Town exhibited relatively high levels of verbal aggression (mean = 2.8), followed by physical aggression (mean = 1.97) and indirect aggression (mean = 1.95). Consistent with these findings, Wondimu (1998) reported that over 50% of adolescent participants in Ababa secondary schools engaged in some forms of aggressive behavior. These results suggest that aggression problems are prevalent in schools. However, studies conducted in secondary schools in Jimma Zone (Getachew & Sintayehu, 2007) and Gurage Zone (Fayso, 2019) indicated that indirect aggression was relatively higher than both verbal and physical aggression. The discrepancy between these findings and those of previous studies may be attributed to differing cognitive abilities. Secondary school students, compared to those in grades seven and eight, possess a greater capacity to express aggression through indirect means, as their cognitive development is more advanced (Getachew & Sintayehu, 2007).

**The relationship between socio-demographic factors and Adolescents' Aggressive behavior**

The findings of this study revealed that household income level and maternal educational level had a significant relationship with students' physical, verbal, and indirect aggression in school. Although the correlations were not strong, the data suggested that adolescents' aggression was relatively higher among students from low-income and low-education families compared to those from high-income and high-education families. This is consistent with the study conducted by Bibire et al. (2023), which found that adolescents from low socio-economic backgrounds tend to exhibit more aggressive behavior compared to those from higher socio-economic backgrounds. Furthermore, the study revealed that students from illiterate families displayed more aggression than their counterparts from literate families.

These findings are also consistent with Hotton's (2003) study, which reported that 30% of children living in low-income families were identified as having aggressive behavior problems, compared to 18% of children in high-income families. However, parental educational level was not significantly related to indirect and verbal aggression except physical aggression. The reason for this study's inconsistency with the above result might be attributable to adolescents' relatively low frequency of contact with fathers than mothers. The lower frequency of contact will not give opportunities for exchanging information and influencing one another.

**Gender Difference in Adolescents' Aggression**

Consistent with earlier research (e.g., Bibire et al., 2023; Bjorkqvist et al., 2001; Hotton, 2003; Kishore et al., 2019), this study suggests that male adolescents had slightly higher mean aggressive scores than female adolescents. This study suggests that males were slightly more aggressive than female adolescents in all three measures of aggressive behavior dealt with. An alternative explanation for this result may be socio-cultural expectations/roles for males and females.

**Age Level Difference in Adolescents' Aggression**

According to previous research, aggressive behavioral problems, particularly physical aggression, are more common among younger children. For many children, these issues tend to decline with age (Hotton, 2003). In contrast, verbal and indirect aggressive behaviors tend to increase as children grow older (Bjorkqvist et al., 1992). Kishore's (2019) study also indicated that younger individuals displayed higher levels of aggression compared to older individuals.

However, the above findings are inconsistent with this study. This study depicted that the mean scores of adolescents with the age groups of 15-18 years had slightly higher aggression mean scores than the age group of 12-14 years. However, the t-test revealed no significant differences among the two age groups in physical, verbal, and indirect aggression mean scores.

The reasons for the difference in the findings may be partially attributable to the different ages of the children assessed. For instance, Hooton's (2003) study has taken samples whose age was up to eleven years. However, this study treats adolescents whose age ranges from 12-18 years, which may make the difference not significant. An alternative hypothesis for the difference noted is differential assessment of aggression. This study used adolescents' self-reports on aggressive behavior, while others used peer ratings and primary caretaker reports.

**Differences in the mean scores of aggression as a function of family structure**

Studies indicated that children living in non-intact families are more likely to display aggressive behavior than children from intact families (Hotton, 2003). He demonstrated that among children living in non-intact families, nearly 26% were reported to be aggressive compared with 18% in intact families. However, the t-test revealed that there was no statistically significant difference between adolescents who were living with both parents and those who were in other living arrangements in all forms of mean aggression scores. The inconsistency of this study with other findings

might be due to larger size of the sample of adolescents involved from intact families compared with non-intact families, or the impact of family structure during adolescence and earlier stages of life may be different, or it could be the similar ways parents use in upbringing their children despite differences in structure.

Although the study effectively demonstrates aggressive behaviors across various socio-demographic groups, it has several limitations. First, it relies on self-report measures, which may not enable the author to accurately report aggressive behaviors. Second, the research was conducted exclusively in government primary schools in Debre Markos Town, limiting the generalizability of the findings to adolescents in that specific area. Finally, while the data show relationships and differences, they do not establish causation. To address these limitations, future research on aggressive behavior could incorporate peer and teacher reports to reduce the impact of social desirability bias. Additionally, future studies should consider including other towns within the East Gojjam Administrative Zone, as well as private primary and government secondary schools, to enhance generalizability. In terms of analysis techniques, moving beyond simple correlations and t-tests to more advanced statistical methods—such as multiple regression and MANOVA—would provide deeper insights and a more comprehensive analysis.

## Conclusion

From the findings of this study, it is possible to conclude that three forms of aggression namely physical, verbal and indirect agression are prevalent in schools. The study concluded that lower levels of parental education and income and being male are linked to higher rates of adolescent aggression. Therefore, interventions should focus on parents with lower educational backgrounds and income levels. These programs should aim to help parents to attain their education and increase their income through various means. Additionally, it is important to be gender sensitive when tackling adolescent aggression.

## References

Adugna, D. (2005). *The relationship between parenting styles and adolescents' aggression*. Unpublished master's thesis, Addis Ababa University, Addis Ababa

Bibire, A. H., Maiwada, R. A., & Saad, K. Y. (2023). S*ocio-Demographic Disparities and Aggressive Behaviour of Secondary School Students in North-West, Nigeria*

Bjorkqvist, K., Osterman, K., Oommen, T.k., & Lagerspetz, K.M.J. (2001). *Physical, verbal, and indirect aggression among Hindu, Muslim, and Sikh adolescents in India. In Manuela Martinez (Ed.). Prevention and control of aggression and the impact on its victims (pp.367-376)*. New York: Kluwer.

Bjorkqvist, K., Lagerspetz, K.M.J., & Osterman, K. (1992). *Direct and indirect aggression scales.*

Dodge, K.A., Pettit, G.S., & Bates, J.E. (1994). Socialization mediators the relation between socioeconomic status and child conduct problems. *Child Development, 65,* 649-665.

Dollard, J., Doob, L.W., Miller, N.E., Mowrer, O.H., & Sears, R.R. (1970). *Frustration and aggression. In E.L. Megargee & J.E. Hokanson (Eds.), the dynamics of aggression: Individual, group, and international analysis (pp. 22-32)*. New York: Harper & Row, publishers. (Original work published 1939).

Eijigu, T. D. (2020). *Defending and passive bystanding behaviors as reactions to bullying at schools in East Gojjam Administrative Zone: The roles of personal and situational factors*. (Doctoral dissertation, Addis Ababa University).

Eshetu, A. A. (2014). Indiscipline Problems of High School Students: The Case of Ethio-Japan Hidasse Secondary School (Addis Ababa, Ethiopia). *Journal of Education and Practice*, 5(37): 23-28.

Fayso, T. (2019**).** Aggressive Behaviour in Secondary Schools of Mesken Woreda: Types, Magnitude and Associated Factors. *Psychology and Behavioral Science International Journal, 10* (5), 001-008. Feldman, R.S. (1985). *Social Psychology: Theories, research, and application.* New York: McGraw-Hill Company.

Franzoi, S.L. (2000). *Social Psychology*. Boston: McGraw-Hill Company.

Getachew, K., & Sintayehu M. (2007). Types, magnitude, predictors, and controlling mechanisms of aggression in secondary schools of Jimma zone. E*thiopian Journal of Education and Science 2(2): 52-61*.80/PBSIJ.2019.10.555800

Hetherington, E.M., & Parke, R.D. (1993). *Child Psychology: A contemporary viewpoint (4th ed.)*. New York: McGraw-Hill Company.

Hotton, T. (2003). *Childhood aggression and exposure to violence in the home. Crime and Justice Research Paper Series*. Statistics Canada, Ottawa: Minister of Industry.

Kishore, J., Tripathi, N., Mandal, R.K., & Tomar, S.K. (2019). Aggression among school adolescents and its association with socio-demographic characteristics: A cross-sectional study. *Indian Journal of Youth and Adolescent Heal*th, 6 (2). 7-13

Krejcie, R.V., & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30, 607-610.

Nguyen, A.J., Bradshaw, C., Townsend, L., & Bass, J. (2020). Prevalence and Correlates of Bullying Victimization in Four Low-Resource Countries. *Journal of Interpersonal Violence, 35*(19-20), 3767–3790. Doi: 10.1177/0886260517709799.

Orpinas, P., Murray, N., ^ Kelder, S. (1999). Parental influences on students' aggressive behaviors and weapon carrying. *Health Education & Behavior, 26(6), 774-787.*

Osterman, K., Bjorkqvist, K., Lanerspetz, K.M. J., Kaukiainen, A., Huesmann, L.R., & Fraczek, A. (1994). *Peer and self-estimated aggression from five ethnic groups. Aggressive behavior, 20, 411-428.*

Papali, D.E., Olds, S.W., & Feldman, R.D. (1999). *A child's world: Infancy through adolescence*. Boston: McGraw-Hill Company.

Pells, K., Ogando Portela, M. J., & Revollo, P. E. (2016). *Experiences of Peer Bullying among Adolescents and Associated Effects on Young Adult Outcomes: Longitudinal Evidence from Ethiopia, India, Peru, and Viet Nam, Innocenti Discussion Paper 2016-03,* UNICEF Office of Research-Innocenti, Florence.

Santrock, J.W. (2000). *Psychology*. Boston: McGraw-Hill Company.

Sharma, V., & Sandhu, G.K. (2006). *A community study of association between parenting dimensions and externalizing behaviors.* J. Indian Assoc. Child Adolescent. Ment. Health, 2(“), 48-58.

Smith, P.K., & Sharp, S. (1994). T*he problems of school bullying. In Smith, P.K. and Sharp, S. (Eds.). School bullying: I*nsights and perspectives (pp.1-19). London: Routledge.

Steinberg, L. (1993). *Adolescence*. New York: McGraw-Hill Company.

WHO (2020). *Global status report on preventing violence against children 2020.* World Health Organization.

Wondimu, H. (1998). *Interpersonal violence in Addis Ababa secondary schools: An iceberg of challenges to the democratization of education in Ethiopia.* In Amare Asgedom et al. (Ed.). Quality education in Ethiopia visions for the 21st century. Addis Ababa: Institute of Educational Research.

Yang, H. (2002). *Adolescents with aggressive behavior: Implications for therapeutic recreation.* LARNet: The Cyber Journal of Applied Leisure and Recreation Research.