

Relationships between Family Communication and Disruptive Behaviors of Adolescents in Harari Regional State

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Abstract

Background: Adolescent disruptive behavior is one of the most commonly reported challenges across the world in general and in Ethiopia in particular. However, the problem has not received the attention it deserves from researchers.

Objectives: the study was aimed at examining the level of disruptive behaviors and its relationship with family communication and related other factors among adolescents.

Materials and Methods: Data were collected from a randomly selected 304 adolescent students (155 males, 149 females) using 'the Problem Behavior Frequency Questionnaire', and 'The Family Communication Scale'. Correlational research design was employed to address the objectives of the study. Correlational analysis, t-test, and regression analysis were conducted to examine relationships and differences.

Results: The statistical analysis yielded that there is a widespread problem of disruptive behaviors among adolescents in the study area. Likewise, a statistically significant negative relationship ($r = -0.51$, $P < 0.001$) was found between family communication and disruptive behaviors. Moreover, family communication, family structures, and sex as variables contribute significantly ($P < 0.05$) to disruptive behaviors in adolescents. Although delinquency does not differ significantly for male and female adolescents, as a group, male adolescents engage in more physical aggressions than female adolescents do ($P < 0.05$). However, the results showed that female adolescents engage in more relational aggression than their males counterparts do ($P < 0.05$).

Conclusion: The results of this study revealed that the number of adolescents engaging in disruptive behaviors is growing at an alarming rate. Poor family communication and non-intact family structures are among the factors that contribute to the problem; hence, to prevent further development of the problem, interventions should be made to limit the problems and its potential negative consequences on family and community as well.

Keywords: Family structure; Female adolescents; Male adolescents; Relational aggression; Physical aggression

1. Introduction

Adolescence is a time when physical, social, emotional, and cognitive changes happen quickly (Gardner and Steinberg, 2005). Steinberg (2011) described this phase of life as a time when a person begins to think on a more complex level and is more receptive to trying new things. Accompanied with these rapid developmental changes, it is typical for adolescents to exhibit some unusual behaviors as long as they do not harm themselves or others, such as their parents, peers, or teachers. However, associated with different factors, sometimes their behaviors evolve into disruptive behavior (Ciarrochi *et al.*, 2001).

Disruptive behaviors in adolescents are described by various researchers as maladaptive behaviors, problem behaviors, aggression, inappropriate behaviors,

behavioral disorders, conduct disorders, and delinquent behaviors, to name a few.

For example, Carolyn *et al.* (2017) characterize disruptive behavior in adolescents as a wide range of behaviors that include disobedience, defiance, aggressive acts against self or others, drug use and abuse, stealing, lying, destruction of property, vandalizing and delinquency. Karimy *et al.* (2018) also define disruptive behaviors in adolescents as defiance of authority figures, furious outbursts, and other anti-social activities such as lying and stealing. In general, defiant behavior, not complying with authority figures, rule-breaking, aggressiveness, absence, or leaving classes early, drug and alcohol abuse, engaging in various delinquent behaviors, harming or attempting to harm others, insulting teachers and other authority figures are all

common themes for disruptive behavior. Disruptive behavior in adolescents: in this study, refers to physical aggression (e.g., hitting, kicking, biting others) and relational aggression (e.g., social exclusion, threatening to stop talking to a friend, spreading rumors), delinquent behavior (skipping school or playing truant, vandalism), and substance use (e.g., smoking cigarettes, drinking alcohol, chewing khat, and slovenliness).

Adolescent disruptive behavior is a worldwide phenomenon where it has a high prevalence and potentially fatal repercussions in adolescents' life themselves and people around them including their families, peers, community, and a nation in general (Kokkinos and Panayiotou, 2004). Prevalence rates have been estimated to vary from elementary to high school students to as high as 27 percent for elementary school students and 51 percent for adolescents (Kaltiala *et al.*, 2000). However, the prevalence of the problem has yet to be studied in an integrated fashion in Africa in general and in Ethiopia in particular, it is expected to be high due to a variety of factors such as poverty, unemployment, recurrent drought, ethnic conflict, incessant civil wars reported here and there, as well as an increasing number of divorces.

The causes of disruptive behavior in adolescents are unknown (Gresham, 2015; Karimy *et al.*, 2018). However, among the factors that contribute to disruptive behaviors in adolescents' family structure, particularly single and step-parent family environment has a reinforcing effect on adolescents' disruptive behavior. For example, according to Rydell (2010) living in single and step-parent families is a strong predictor of disruptive behavior in adolescents. Reinforcing this idea, Ginther and Pollak (2013) revealed that children with divorced parents have greater behavioral difficulties than children in intact households and that children living in stepparent and blended families also have higher behavioral problems. Some recent studies have also demonstrated that adolescents from single-parent families are involved in more different disruptive behaviors than adolescents from intact families (Ginther and Pollak, 2013; Bruffaerts *et al.*, 2016; Park and Lee, 2020). These studies portrayed how single and stepparent families contribute to different problem behaviors in adolescents. Furthermore, these researchers stated that single parents' lack of time to spend and supervise their children, as well as scarcity of resources for raising children, are the major causes of reported

disruptive behavior among adolescents from single parents compared to adolescents from intact families.

Poor family communication, according to researchers in the field, is another possible factor for disruptive behaviors in adolescents. For example, inappropriate or poor family communication results in aggressiveness and conflict of adolescents with authority figures (Van As and Janssens, 2002). In the same vein, Mastrotheodoros *et al.* (2020) revealed that poor family interaction and communication result in different levels of problem behaviors in adolescents. Supporting the preceding notion, Halpern (2004) indicated that poor family communication yields a greater incidence of problem behaviors such as substance abuse, aggressiveness, and a problem with emotional regulation in adolescents. Furthermore, Freed *et al.* (2016) found that poor family communication is a significant predictor of disruptive behavior among adolescents. Moreover, Dursic (2018) discovered that adolescents from households who do not value family communication have externalizing behavioral problems. Other researchers have also singled out poor family communication as a major predictor of disruptive behavior in adolescents (Freed *et al.*, 2016); especially increased participation in risky sexual behaviors (Bianchi *et al.*, 2019); different delinquency and conduct problems as well as to other related negative outcomes, such as substance use and abuse (Schwartz *et al.*, 2005).

Research studies conducted by scholars of the area evidenced that healthy/positive family communications protect adolescents from different disruptive behaviors. For example, open family communication through nurturing positive relationships among family members could serve to lower the degree of delinquency and aggressive behavior in adolescents (Bares *et al.*, 2011). Correspondingly, Kapetanovic *et al.* (2019) stated that open communication among family members can protect an adolescent from engaging in delinquent behaviors over time. Likewise, Elgar *et al.* (2013) and Molleda *et al.* (2017) asserted that healthy and positive communication among family members is negatively associated with internalizing and externalizing behaviors in children and adolescents. Similarly, Molleda *et al.* (2017) found that healthy family communication is effective in reducing behavioral problems and is positively related to an individual's sense of identity and negatively related to behavior problems in adolescents (Schwartz *et al.*, 2005).

In the Ethiopian context, research studies that examine disruptive behavior and its associated factors in an integrative fashion are rare. However, some research studies done in different parts of the country revealed the prevalence of disruptive behaviors in adolescents. For example, National Adolescent and Youth Health Strategy (2016) indicate the extensive use and abuse of different substances such as Khat, cigarettes, and alcohol among adolescents and youth in Ethiopia. According to the survey, approximately 4.4% of Ethiopian adolescents and youth smoke cigarettes or other tobacco products. Adolescents and youth in metropolitan areas are more likely to engage in the activity where nearly half of them (45.6%) consume alcohol more than six times a month. Prevalence of alcohol consumption is higher among male (47.7%) than female (43.5%) adolescents and youth. Evidence shows that 36.6% of adolescents and youth between the age of 15 to 29 use any form of alcohol, with the figure being higher among males (42.6%) than female (29.5%) population. In the same vein, a research study done by Antene Birhanu *et al.* (2014) in northwestern Ethiopia, Woreta town, revealed the prevalence of various behavioral problems in adolescents including the use of alcohol, cigarettes, and khat, with the use of alcohol being the most prevalent one. The researchers also discovered that 312 (47.9%) of the 651 school adolescents surveyed have reported the use of different substances. In line with this idea, a cross-sectional research study conducted in eastern parts of Ethiopia, by Ayalu Reda and her colleagues (2012) discovered that adolescents in the area are more likely to engage in various disruptive activities, including substance use and abuse (e.g., sloppy chewing of khat, using shisha, smoking cigarette).

Adolescents' disruptive behaviors in Ethiopia are also widespread in the school environment. For example, according to Guesh Birhanu (2018), late arrivals at schools for learning, absenteeism from school, playing truant, slovenliness (clothing code violations), argumentativeness, defiant disruptive behavior, and inattentiveness are among the most commonly reported adolescent students' behavioral problems in school milieus. Correspondingly, another study conducted by Tadele Fayso (2019) indicated that the three forms of aggression, namely indirect, verbal, and physical attacks were prevalent among school adolescents. Likewise, Zeray Teklehaymanot (2019) revealed that adolescent students in schools exhibit different disruptive behaviors including failure to complete classwork or homework,

using indirect expression against other students, spreading rumors about teachers, damaging school property, distracting classes while teachers are teaching, not paying attention, stealing, or vandalizing school or class properties. In the same way, a cross-sectional study on adolescent students of Jimma zone secondary schools by Kinde Getachew and Mekonnen Sintayehu (2006) found that physical aggression, verbal aggression, and indirect aggression were prevalent among adolescents in secondary schools. Moreover, Mulgeta Mekuria *et al.* (2019) conducted a study on adolescent students in Ambo and found that of the adolescents who participated in the study, 31% of them were reported to engage in different antisocial behaviors including aggression, conflicting with authorities, truancy, and the like. In the same vein, a research study conducted in northern Ethiopia, Tigray region, by Alem Girmay and Tekelewoin Mariye (2019) revealed that adolescents' problem behaviors including risky sexual behaviors and using different substances were commonly reported incidence.

Although there are a few inconsistencies, studies conducted on adolescents demonstrated that adolescent sex has a considerable effect on their disruptive behaviors. Similar to reports in the western context, studies conducted in Ethiopian context revealed a prevalence of disruptive behaviors in both sexes. However, the way disruptive behaviors manifest in both sexes differed, with boys involved in more physical aggression and girls committing more verbal aggression or relational aggression (Henok Girma *et al.*, 2019; Mulgeta Mekuria *et al.*, 2019; Zeray Teklehaymanot, 2019). To the contrary, other researchers such as Tadesse Fayso (2019) and Beza Bayu (2020) reported the absence of sex differences in adolescents' engagement in disruptive behaviors.

Nowadays, here in the Ethiopian context, people are increasingly complaining that today's adolescents are not complying with authorities, are more engaged in anti-social behaviors, substance use and abuse, dropping out of school, and have no respect for their elders, and so on. Adolescents of Harari regional state are not exception. For example, since the researchers have been living in the Harari Regional State, we have had the opportunity to visit secondary schools in the region. During our visits, we observed grave disruptive behaviors in adolescents attending school. Nosily chatting in the class while class is in progress, coming to class late, barging into class after coming late while

teaching is already in progress, physically fighting with each other while teaching is in progress, leaving the classroom without getting permission while teaching is in progress, insulting teachers (swearing at teachers), even throwing stones at teachers, teasing and bullying teachers, hitting teachers and running away, chewing khat in school premises, getting into class with khat stashed in the cheeks are some of the major disruptive behaviors we personally witnessed at schools in the Harari Regional State.

Research studies conducted so far in different parts of the country have revealed the prevalence of disruptive behaviors in adolescents. However, no research has been attempted to examine the contributing effects of family factors such as family communication and family structure on adolescents' disruptive behaviors in an integrated fashion in Ethiopian contexts in general, and in the Harari Regional State in particular. Hence, given the scarcity of research in this area of interest, the present study is worth investigating. Thus, this research was conducted to answer questions related to (1) What is the level of adolescents' disruptive behaviors in the Harari Regional State? (2) Is there a statistically significant sex difference among adolescents in their involvement in the dimensions of disruptive behaviors? (3) Is there a statistically significant relationship between family communications and disruptive behaviors among adolescent students? (4) Do family communication, family structure, and sex of the adolescent contribute to disruptive behaviors of adolescents?

2. Materials and Methods

2.1. Research Design

A correlational research design was employed to address the objectives of the study. A correlational research design was selected for its appropriateness to examine the associations among predictor and criterion variables. This design helps to describe and measure the degree of relationship between two or more variables or sets of scores and explain the relationship among variables of interest.

2.2. Research Setting

The research was conducted in the Harari Regional State. Harar, one of Ethiopia's oldest and popular cities, is located in the Ethiopian Highlands' eastern extension. It is located 522 kilometers east of Ethiopia's capital, Addis Ababa. Harar is situated at an elevation of 1,885m

above sea level. Currently, 183,344 people are living in the region. About 69% of the inhabitants of the town of Harar are followers of the Muslim religion, and 27% are followers of the Ethiopian Orthodox Christianity. The major ethnic groups in the Harari region are Oromo (52.3%), Amhara (32.6%), Harari (7.1%), and Gurages (3.2%). According to the Ethiopian Central Statistical Agency [CSA, (2007)], 12.5% of children under the age of 18 live either with only one parent or alone because of parental loss. Furthermore, 10.15% of marriage ends in divorce. Unemployment and illiteracy are also the commonly reported challenges in the region (CSA, 2007).

2.3. Participants of the Study

The present study was conducted at two randomly selected senior secondary schools in Harari Regional State. One school is a government-owned school (Shekib Senior Secondary School) and the other school is privately owned senior secondary schools (SOS Academy). Currently, 1403 adolescent students (1088 in Shekib and 315 in SOS Academy) have been enrolled and attending their education in their respective schools. The sample size of the study was determined using Drapper and Smith's formula for the non-single population (1998). According to Drapper and Smith, sample size (n) is a function of the factors (X_i) and categories (C_k) involved in research such that a minimum of 10 observations is required for each category of a factor $n = (C_{f1} \times C_{f2} \times C_{f3} \times \dots \times C_{fn})$. Where, n = sample; C_{f1} = number of categories of factor 1; C_{f2} = number of categories of factor 2; C_{f3} = number of categories of factor 3; and C_{fn} = number of categories of factor n .

There were four variables in the present research (i.e., sex, school type, family structure, and grade level). Accordingly, there were two categories in the first factor (male and female), two categories in the second factor (private and government school), two categories in third factor (intact and non-intact family structure), and four categories in the fourth factor (grades 9, 10, 11 and 12). Hence, the minimum sample size the researchers have to draw is $2 \times 2 \times 2 \times 4 \times 10 = 320$. However, to increase statistical precision and representativeness, the sample size was increased to 325 participants. After fixing the total sample size (n) to be drawn from the population (N), using the above formula, then a proportional allocation method was used to determine the number of participants to be drawn from each of the two schools.

Accordingly, 325 students, of whom 252 (129 were male and 123 were female) from the Shekib Senior Secondary School and 73 (male were 37 and female were 36) from SOS Academy, participated in the study. The sample size of the participants selected from each school was determined based on the respective schools' total number of students. In such a way, the number of students currently enrolled in each school was proportionately represented in the study. However, of the 325 students, 21 (11 male and 10 female) either did not return the questionnaire or wrongly and inappropriately responded to the items. Hence, data analysis was conducted on 304 respondents, of which 155 were male and 149 were female students.

2.4. Data Collection Tools

A self-report instrument was used to collect data on three important issues; participants' demographic information like sex, age, grade level, and family structure (Part I), Problem Behavior Frequency Scale (PBFS) used to measure disruptive behavior in adolescents (Part II), the Family Communication Scale (Part III) used to measure family communication.

Problem behavior frequency scale (PBFS): To measure the disruptive behavior in adolescents, an adolescent self-report version of Problem Behavior Frequency Scale (PBFS) developed by Farrell *et al.* (1992) then modified by Farrell *et al.* (2000) was used. The scale contains 26 items that cover four general areas of problem behaviors in adolescents: (1) physical aggression, (2) nonphysical/relational aggression, (3) delinquent behavior and (4) drug use. Responses were based on a 6-point scale: 1 (never), 2 (1–2 times), 3 (3–5 times), 4 (6–9 times), 5 (10–19 times), and 6 (20 times or more). Higher scores indicate more involvement in disruptive behaviors. Sample items of the scale were: threatened a teacher, spread rumors, got suspended from school for bad behavior, damaged school or other property that did not belong to them, smoked cigarettes. Pertaining to the scale's internal consistency adequate and reasonably high Cronbach's α coefficients have been reported for all dimensions of the scale. A number of items and alpha coefficients for the PBFS-26 subscales were as follows: The alpha coefficient for drug use dimension (6 items) of the scale was $\alpha = 0.87$ in the urban sample and 0.88 in the rural sample. In the urban sample, the alpha coefficient for the physical aggressiveness dimension with seven items was $\alpha = 0.85$,

while in the rural sample, it was $\alpha = 0.82$. Similarly, the alpha value for the non-physical/ relational aggression dimension with seven items was $\alpha = 0.85$ in the urban sample and $\alpha = 0.84$ in the rural sample. For delinquent behavior dimension with six items Cronback alpha value $\alpha = 0.79$ and $\alpha = 0.77$ in the urban and rural samples reported, respectively. Further, in establishing the factor structure of the scale reasonably model fit results were reported such that Comparative Fit Index (CFI) = 0.93 was reported.

The family communication scale: The scale was adapted from the family communication dimension of Brief family relationship scale. The scale has four items designed to measure family communication. The Scale was scored using a 5-point Likert scale and the participants were then required to rate the degree to which they agreed with each of the statements on a scale. As regards the meanings of the scale, a high score on communication dimensions represented a better sharing of ideas and understanding each other among family members and vice versa. A sample item of the scale is: In our family, we can talk openly in our home. As regards the internal consistency of the scale, ($\alpha = 0.89$) was reported (Fok *et al.*, 2014).

2.5. Pilot Study

Validation of the present instrument went through different stages beginning with checking the face and content validity of the scale using five experts in the field. Concerning the face and content validity of the scale, two associate professors and one professor including two doctoral students and one doctoral student in Language and Literature forwarded their comments after looking into the instruments' relevance, appropriateness, clarity, and conceptual scope where they endorsed the two scales along with these criteria.

During their evaluation of the scales, the experts found some problems and forwarded their feedback after checking the items' face validity where their comments and suggestions were forwarded as follows: 1) their comments began with commenting on the problem behaviors frequency scale's rating scale where the scale is measured on a 6-point scale: 1 (never), 2 (1–2 times), 3 (3–5 times), 4 (6–9 times), 5 (10–19 times), and 6 (20 times or more). They all asserted that because such a rating point scale perplexes respondents and requires them to recall the number of times they have performed each activity in detail; they may not offer to think in

detail and respond to each item of the scale as needed which could end them responding to the items of the scale at random than reflecting their true behavior. Presenting this justification, they suggested a five-point rating scale presented as: 1 (never), 2 (1–2 times), 3 (3–5 times), 4 (6–9 times), and 5 (10 times or more) as more appealing to adolescents since it allows them to answer each scale item without trouble rather than the 6-point rating scale. The calculated content validity index ratios of all the scales were also found reasonably high. Accordingly, Scale level content validity index of Problem Behaviour Frequency Scale was (S-CVI = 0.97) which was found to be satisfactory in line with Polit and Beck (2006) recommendation that a minimum for S-CVI should be 0.8 for reflecting content validity of particular measure. In the same vein, Scale level content validity index of the Family communication scale was (S-CVI = 0.98). Thus, the values of the content validity index of the measures indicated that the items on the scales are representative of the construct used for drawing data from participants of the study.

Once the scales were modified as per expert comments, the scales were first translated from English to the native languages (Amharic and Oromo language) by a team of experts. Then back translation was made by experts of two bilinguals having a good command of the English language. Their Educational qualification was a Ph.D. student in English language and literature having a good command of English language and a Ph.D. student in Oromo language and literature with having a good command of English language. These experts were not familiar with the original English version scales. The scales translated into Amharic and Oromo language were given to the experts. They were requested to translate the Amharic and Oromo language versions of the scales into English, which they did. Then, only minor differences observed during the time of back and forth translation were corrected. Accordingly, the Amharic and Afan Oromo translations were accepted and the scales were finalized. Data collected from the participants were analyzed using Chronback alpha internal consistency reliability followed by Exploratory and confirmatory factor analysis.

Following exploratory factor analysis performed for the problem behavior frequency scale, seven items that had low loading effects and cross loading on multiple factors were eliminated. As a result, physical aggression dimension = 5 items ($\alpha = 0.807$); relational aggression dimension = 4 items ($\alpha = 0.803$); delinquency dimension

= 4 items ($\alpha = 0.724$); and drug use dimension = 6 items ($\alpha = 0.77$), were obtained respectively. Confirmatory factor analysis was also made to examine the fitness of the model obtained through exploratory factor analysis such that the obtained result was fit CMIN = 431.03, CMIN/DF = 2.95, CFI = 0.901, and RMSEA = 0.080. The family communication dimension along with another dimension of the scale was also subjected to exploratory factor analysis where the scale maintained all dimensions of the scale. Following factor analysis made with the scale, Cronbach alpha result of $\alpha = 0.89$ was reported. The CFA made also fit CMIN = 371.5, CMIN/DF = 2.8, CFI = 0.942, and RMSEA = 0.07, respectively.

2.6. Procedure

After all the participants were in their respective classrooms, the researchers introduced themselves to the participants. Then, to get the students' permission to participate in the study, the purpose of the study was clearly communicated to them. Then, after obtaining the students' permission to participate in the study, a convenient time for the students to fill in the survey questionnaire was set in a mutual agreement. To avoid any confusion arising during data collection, the participants were given appropriate instructions for completing the questionnaires in their respective classrooms. Accordingly, the questionnaire was distributed and collected back. The whole process of data collection and administration was undertaken in the presence of the researchers to avoid some inconveniences that could arise during data collection.

2.7. Data Analysis

After the data were collected, coded, and encoded into (SPSS) window, version 24, data cleaning was performed such that missing and incomplete responses were discarded and made ready for further analysis. Descriptive statistics such as Mean, SD and percentage were employed to summarize the data. Before employing inferential statistics such as Pearson product-moment correlation coefficient, t-test, and Regression, assumptions of employing these statistical tools were checked and found to be safe for use. For example, before running regression analysis, multicollinearity among variables of interest was checked such that no relationship between independent variables was found above $r = 0.8$, suggesting that the data have no multicollinearity problem and safe to run regression

analysis. Accordingly, Pearson product-moment correlation coefficient was used to measure the association among variables of the study. Likewise, to examine whether there is a statistically significant sex difference in the dimensions of disruptive behavior among adolescents, an independent t-test was employed. Moreover, regression analysis was done to examine the independent and collaborative effects of predictor variables on the dependent variable.

2.8. Ethical Considerations

This study involved a host of ethical issues. To begin, approval to conduct the study was obtained from the respective high schools where data were collected. In addition, participants were notified that their participation was voluntary and that they can withdraw from the data gathering procedure at any moment. Furthermore, all participants were instructed not to write their names on the questionnaires to keep the information anonymous. Moreover, participants were also guaranteed that the information collected from them would be kept confidential used solely for the

purpose of the study and that the information they submit would not be shared with anybody else.

3. Results

In this section, the demographic characteristics of the participants and the results obtained are presented respectively based on the specific objectives.

3.1. Socio-demographics

In this section, the overall background of the respondents in terms of age, sex, grade level, and family structure are presented (Table 1). Table 1 shows the demographics of the participants. Nearly half of the participants in the current study were female students. About 70.4 percent of respondents came from an intact family structure, whereas 29.6% were from non-intact families (i.e., either living with single parents, step-parent, relatives or others). Participants in the study ranged in grade level from ninth to twelfth. In terms of their age range, they are within the age bracket from 14 to 20.

Table 1. Demographic characteristics of the study participants.

Variable	No.	%	Variable	No.	%		
Sex	Male	155	51%	Family Structure	Intact	214	70.4
	Female	149	49%		Non- intact	90	29.6
	Total	304	100%		Total	304	100
Grade level	9 th	61	20.1	Age of respondents	Min	Max	Mean
	10 th	62	20.4		14	20	16.78
	11 th	104	34.2				
	12 th	77	25.3				
Total	304	100					

3.2. Levels of Disruptive Behaviors in Adolescents

In order to identify the level of disruptive behavior of adolescents in the study area, mean values were used to classify the sample and identify the number of cases scored above the mean. As shown in Table 2, a large mean (13.2) and standard deviation (SD = 7.1) were observed regarding the level of disruptive behaviors among adolescents in the study area. Therefore, it can be inferred that disruptive behavior is prevalent among adolescents in the study area. This could be explained by the fact that since all items included on the scale are negative (e.g., threatened a teacher, threatened someone

with knife or stick, drinking alcohols, smoking cigarette, damaged school or other property that did not belong to you, using hashish, etc.), high scores like that of the mean reported in the presented study suggest a greater prevalence of disruptive behaviors among the adolescents in the study area. In support of the preceding notion, among 304 adolescents who took part in the study, only 37 (12.2%) reported never being involved in any disruptive behavior, whereas 267 (87.8%) reported involvement in different disruptive behaviors from one time to several times.

Table 2. The Level of disruptive behaviors in adolescents (N = 304).

Variables	No of items	Min.	Max.	Mean	SD	Never been involved in DB	Involved in DB for more than 1 time to several times.
Disruptive behaviors	19	1	56	13.5	7.1	37(12.17 %)	267 (82.82%)

Note: DB implies Disruptive behaviors in adolescents.

3.3. Descriptive Summary of the Study Variables

The mean and independent T-test results of the major study variables by family structures and sex of respondents are presented in Table 3. As demonstrated in Table 3, adolescents from intact family structures regarded their families' communication better than adolescents from non-intact family structures with a mean and a Standard deviation, Intact (M = 17.1 and SD = 4) and Non-intact (M = 14.63 and SD = 4.5), respectively. The difference is also statistically significant ($t = 4.66, P < 0.05$). It is shown in the same Table that adolescents from non-intact family structures, on the other hand, are more prone to engage in disruptive behaviors (M = 16.21 and SD = 10.27) than those from intact families (M = 12.43 and SD = 11.05), respectively. The observed difference is also statistically significant ($t = -2.78, P < 0.05$).

Similarly, as shown in Table 3, there is a statistically significant ($t = -3.17, P < 0.05$) difference between the two sexes in the involvement of physical aggression, with male adolescents being more involved in physical aggression behaviors than female adolescents. There is a statistically significant ($t = 2.34, P < 0.05$) difference between female and male adolescents in their relational aggression where female adolescents were found to engage in more relational aggression than their male counterparts. Significant difference between the two sexes in delinquent behaviors was not observed ($t = 0.73, P > 0.05$). Moreover, in the same table, a statistically significant ($t = -1.198, P < 0.05$) difference was observed between the two sexes in substance use, with male adolescents using substances at somewhat higher rate than their female adolescent counterparts do.

Table 3. Mean and Independent t-test results of family communication, disruptive behaviors and its dimensions by Family structures and Sex (N = 304).

	Family structure	N	Mean	SD	t value	df	P-value
Communication	Intact	214	17.10	4.020	4.66	302	0.000
	Non intact	90	14.63	4.560			
Physical aggression	Female	149	2.78	2.986	-3.17	302	0.002
	Male	155	4.14	4.340			
Relational aggression	Female	149	2.89	3.506	2.34	302	0.020
	Male	155	2.01	2.989			
Delinquency	Female	149	3.64	2.786	0.738	302	0.461
	Male	155	3.36	3.664			
Drug use	Female	149	3.69	3.132	-1.198	302	0.048
	Male	155	4.52	4.079			
(Disruptive behavior)	Intact	214	12.43	11.059	-2.78	302	0.006
	Non intact	90	16.21	10.274			

3.4. Correlation among the Variables of Interest

Pearson product-moment correlation coefficient was run to test the relationships among the variables of interest. As shown in Table 4, a statistically significant ($r = 0.167, P < 0.001$) correlation between sex and disruptive behavior in adolescents was reported. This implies that male adolescents are more prone to involve in disruptive behaviors than female adolescents do. It was discovered that there is a strong and negative relationship between

family communication and family structure ($r = -0.260, P < 0.001$). That is, families in the intact family structures initiated discussion and communication among their members more than in non-intact family structures. In the same vein, a statistically significant ($r = 0.158, P < 0.001$) relationship between family structure and disruptive behaviors in adolescents was obtained, indicating that adolescents from non-intact family

structures are more prone to engage in disruptive behaviors than adolescents from intact family structures.

Likewise, in Table 4 a significant and negative relationship between family communication and disruptive behaviors in adolescents is shown ($r = -0.51$, $P < 0.05$). This implies, as family members share ideas, have a discussion with their adolescent children, and engage more, disruptive behaviors in adolescents may decrease. In the same table, a statistically significant relationship is observed between physical aggression and sex ($r = 0.180$, $P < 0.001$). This implies male adolescents may be inclined to engage in physical aggression more than female adolescents do.

Moreover, in the same table, statistically significant and negative relationship is shown between family

communication and delinquency in adolescents ($r = -0.254$, $P < 0.001$). This implies that increased family interaction among its members may lead to a decrease in delinquent behaviors among adolescents. Furthermore, in the same table, a negative and significant relationship is shown between drug use and family communication ($r = -0.152$, $P < 0.001$). That means family communication among family members may decrease drug use and abuse behaviors of adolescents. A significant ($r = -0.182$, $P < 0.001$) negative relationship is shown between sex and relational aggression. This implies that female adolescents participate more often in relational aggression than male adolescents.

Table 4. Bivariate correlation coefficients among major variables of the study ($N = 304$).

	1	2	3	4	5	6	7	8	9
Sex (Male 1; female 0)									
Age	0.10								
Grade level	0.04	0.685**							
Family structure	0.016	-0.118*	-0.117*						
Family communication	0.021	0.019	0.120*	-0.26**					
Disruptive behaviors	0.167**	0.067	-0.024	0.158**	-0.51**				
Physical aggression	0.180**	-0.04	-0.057	0.136**	-0.100	0.733**			
Relational aggression	-0.182**	0.027	-0.013	0.116**	-0.091	0.716**	0.585**		
Delinquent behavior	-0.042	-0.021	-0.015	0.167**	-0.254**	0.710**	0.477**	0.506**	
Drug use	0.114*	0.127*	0.083	0.125**	-0.152**	0.646**	0.302**	0.376**	0.439**

Note: 1 = Sex; 2 = Age; 3 = Grade level; 4 = Family structure; 5 = Family communication; 6 = Disruptive behavior; 7 = Physical aggression; 8 = Relational aggression; 9 = Delinquent behaviors; and 10 = Drug use.

3.5. Associated Factors to Disruptive Behavior

Regression analysis was done to examine the independent and cumulative effects of the study variables on the criterion variable (Disruptive behavior). Normality, linearity, homoscedasticity, independence of residuals was checked before running multiple regression analysis. To check statistical significance of the results,

F-test (ANOVA) was run and found to be significant ($F = 12.4$, $P < 0.05$). Table 5 shows the results of a multiple regression analysis conducted to examine the combined effects of predictor variables on disruptive behavior in adolescents. It was found that all of the predictors collectively explain around 5.7% of the variance in adolescents' disruptive behaviors.

Table 5. Summary of multiple regression analysis.

Model	R	R ²	Adjusted R ²	Std. error of the estimate
1	0.257 ^a	0.066	0.057	10.638

a. Predictors: (Constant), family Communication, Sex, Family structure

As shown in Table 6, all predictor variables, including sex ($t = 3.0$, $P < 0.05$), family structure ($t = 2.13$, $P < 0.05$), and family communication ($t = -2.11$, $P < 0.05$), were found to have a significant impact on the criterion variable –adolescents' disruptive behavior. It can therefore be concluded that the family structure,

especially a non-intact family structure, sex, especially being male and poor communication among family members could leave fertile ground for disruptive behaviors in adolescents.

Table 6. Multiple regression analysis of predictors on the criteria variable.

Model	Unstandardized Coefficients		t -value	Sig.
	B	Std. error		
1 (Constant)	12.915	3.439	3.756	0.000
Sex	3.664	1.221	3.001	0.003
Family structure	2.958	1.385	2.136	0.033
Family communication	-0.310	0.146	-2.118	0.030

Note: *Dependent variable: Disruptive behavior.*

4. Discussion

The present study revealed that the prevalence of disruptive behaviors among adolescents in the study area is substantial. As evidence of this notion, among 304 adolescents who took part in the study, only 37 (12.2%) reported never being involved in any disruptive behavior, whereas 267 (87.8%) reported involvement in different disruptive behaviors from one time to several times. Therefore, it is possible to infer that the prevalence of disruptive behavior among adolescents in the study area is widespread. Consistent with the present results, a few scattered research studies previously conducted in various parts of Ethiopia demonstrated the prevalence of disruptive behaviors among adolescents. For example, National Adolescent and Youth Health Strategy (2016) reported the extensive use of different substances such as khat, cigarettes, and alcohol among adolescents and youth in Ethiopia where nearly half of them (45.6%) consume alcohol more than six times in a month. In the same vein, Antene Birhanu *et al.* (2014) revealed that 312 (47.9%) of the 651 school adolescents surveyed in Woreta town in north-central Ethiopia have reported use of various substances such as alcohol, cigarettes, and khat.

Previous studies in the field also revealed different factors contributing to disruptive behaviors of adolescents including family environmental factors such as poor family communication, non-intact family structures where adolescent children live with single or stepparent families, to mention a few (Rydell, 2010; Ginther and Pollak, 2013). In line with the previous study, in the current study, a statistically significant negative relationship between family communication and disruptive behaviors in adolescents was reported. This implies as family members share ideas, have discussions with their adolescent children, and engage them more, disruptive behaviors in adolescents decrease. In support of this notion, Đurišić (2018) discovered that adolescents from households that do not value family communication externalize behavioral difficulties. In the

same vein, Mastrotheodoros *et al.* (2020) revealed that poor family interaction and communication result in different levels of problem behaviors in adolescents. Moreover, other researchers associated poor family communication to disruptive behavior in adolescents (Freed *et al.*, 2016; Bianchi *et al.*, 2019). On the other hand, healthy/positive family communications buffer adolescents from different disruptive behaviors. For example, Romero-Abrio *et al.* (2019) asserted that open family communication can serve as a protective factor against problem behaviors in adolescents. Likewise, Bares *et al.* (2011) stated that openly communicating with families would lower the degree of delinquent and aggressive behaviors in adolescents.

With regard to family structure and disruptive behavior in adolescents, a statistically significant impact of family structure on adolescents' disruptive behavior was reported such that adolescents from a non-intact family structure are more likely to engage in disruptive behaviors than adolescents living with both their biological parents (father and mother). Corroborating this notion, Rydell (2010) asserted that living in single and step-parent families is a strong predictor of disruptive behavior in adolescents. Reinforcing this idea, Ginther and Pollak (2013) revealed that children with divorced parents have greater behavior difficulties than children in intact households and that children living in stepparent and blended families also have higher behavioral problems. Similarly, some recent studies also demonstrated that adolescents from single-parent families are more involved in different disruptive behavior problems than adolescents from intact families (e.g., Mason, 2012; Ginther and Pollak, 2013; Bruffaerts *et al.*, 2016; Park and Lee, 2020).

The sex of the respondents is also among the significant factors contributing to disruptive behaviors in adolescents in that male adolescents are more inclined to involve in disruptive behaviors than female adolescents do. Consistent with this result, Araban (2020) revealed that boys participate in more disruptive behavior than

girls of their age. Moreover, Smaragdi *et al.* (2020) reported that more boys than girls were involved in different disruptive behaviors. Furthermore, Loukas *et al.* (2003) stated that beginning in childhood and continuing into adulthood, adolescent boys exhibit more anti-social behaviors than their female counterparts. Pertaining to sex and dimensions of disruptive behaviors in adolescents, in line with our expectations, male adolescents reported to have engaged in significantly higher numbers physically aggressive behaviors than their female counterparts. In line with this finding, Kinde Getachew and Mekonin sintayehu (2006); Zeray Teklehaymanot (2019) asserted that, while both sexes have been found to engage in disruptive behavior, boys are more physically aggressive than girls.

In support of the preceding finding, Mulgeta Mekuria *et al.* (2019) revealed that boys engaged in more aggressions that are physical whereas girls engaged in more verbal aggressions or relational aggression. The results of the present study also revealed a significant sex difference in relational aggression such that female adolescents were found to engage in relational aggression than male adolescents of their counterparts. Similar to the present results, Mulgeta Mekuria *et al.* (2019) revealed that boys engaged in more aggression that is physical whereas girls engaged in more verbal aggression or relational aggression.

In contrast to the results of this study, however, in Canada, Delveaux and Daniels (2000) revealed no sex differences in adolescent relational aggression. Even against the commonly reported results, in Finland, Salmivalli and Kaukiainen (2004) revealed that male adolescents endorsed relational aggression more than female adolescents. This may be because adolescents spend the majority of their time with their peers, thus when they are uncomfortable with their peers' behavior, they use relationally aggressive techniques to avoid conflict and retain ties with their peers. Thus, some adolescents choose to employ relational aggression, as opposed to physical aggressive strategies because they believe that relationally aggressive strategies will be more effective in terms of achieving self-interest and revenge goals, while simultaneously keeping them out of trouble and maintaining relationships with the majority of their peer groups.

In this study, a statistically significant substance use difference between male and female adolescents was reported in that male adolescents were reported to use different substances more than female adolescents. In

the study area, though it is common for both sexes to chew khat, adolescent males chewed the narcotic plant and other substances such as hashish and marijuana significantly more frequently than their female counterparts do. Corroborating this result, Greenfield *et al.* (2010) revealed that though women are just as likely as men to develop a substance use disorder, men are more likely than women to use almost all types of illicit drugs.

5. Conclusions and Recommendations

The statistical analysis yielded that there is a widespread problem of disruptive behaviors among adolescents in the study area. The implication is that unless preventative measures are taken sooner rather than later, this problem could become a serious problem that is more difficult to reverse. In addition, a statistically significant negative relationship was reported between family communication and disruptive behavior in adolescents. Furthermore, in this study, sex, family structure, and communication among family members significantly contributed to disruptive behaviors in adolescents. This suggests that being male, coming from a non-intact family structure (i.e., single, stepparent, etc.), and poor communication between family members could provide a fertile ground for disruptive behaviors in adolescents. Moreover, although delinquency did not differ significantly for male and female adolescents, as a group, male adolescents engaged in more physical aggression than female adolescents. On the other hand, female adolescents engaged in more relational aggression than their male counterparts did. This suggests that biological factors, such as increase in testosterone levels in males and a culturally instilled masculinity, might be contributing to male adolescents' physical aggression behaviors over their female counterparts.

The responsible body should provide training and orientation to adolescents and their parents aimed at creating disciplined, well-mannered, and responsible adolescents. Non-intact family structures (i.e., single parent and stepparent families) have been frequently linked to different challenges that could potentially affect the vibe of family life. Hence, parents of adolescent students, especially those living in single parent or stepparent families should receive orientation and training regarding how to allocate time for discussion and how to share ideas among family members so that their adolescents learn to avoid engaging in various disruptive behaviors. Further

research needs to be conducted to elucidate the role of sex in the dimensions of disruptive behaviors in adolescents to clear possible inconsistencies noted in this and many other studies.

6. Acknowledgments

Without the contributions of different entities, this study would not have been possible. In the first place, we would like to thank God - who makes everything possible - for giving us the enthusiasm, inspiration, and determination to complete this research. Secondly, Haramaya University deserves gratitude for allowing the first author of this paper to take a leave of absence during his PhD study, leading to the writing of this article. In addition, we would like to extend our gratitude to Addis Ababa University, school of psychology, for facilitating this research from beginning to end. The participants of the study who provided the essential data for this study are also to be commended. We thank you all for your contribution.

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