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FACTORS CONTRIBUTING TO ADOLESCENTS'EMOTION REGULATION IN SOME SELECTED SECONDARY SCHOOLS OF HARARI REGIONAL STATE, ETHIOPIA

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Abstract
The study aimed to examine factors contributing to adolescent emotional regulation in secondary schools of Harari Regional State. The study pursued a correlational research design where two standardized tests (Family Adaptability and Cohesion Evaluation Scale IV and Emotion Regulation for Adolescents) are employed to measure family cohesion and emotion regulation. For this purpose, data were collected from 311 grade nine and ten students using a stratified random sampling technique from the total secondary schools in Harari Regional State. Both descriptive and inferential statistics were used to analyze the data. The analysis employed SPSS version 20 to calculate the Pearson Correlation Coefficient, one-way ANOVA, two-way ANOVA, and stepwise multiple regression. The Pearson correlation results indicated that family cohesion is an important variable in determining adolescent emotion regulation. Results of the one-way ANOVA also showed that adolescents' emotion regulation differs as a result of their parent's educational level. In addition, the two-way ANOVA indicated that adolescent's emotion regulation changed as a function of the combined effects of family structure and gender. The multiple regressions revealed that family cohesion added significant value to the prediction of emotion regulation. To conclude, gender, family structure, family cohesion, and parents' educational level contribute to adolescent's emotional regulation.

Keywords: Cohesion, Emotion, Family, Regulation, Structure

1. Introduction

Although adolescence is a life span that is socio-culturally constructed, it is viewed as the years between the onset of puberty and the beginning of adulthood (Cooper, Shaver, & Collins, 1998). It is a developmental stage characterized by a rapid spurt in physical growth accompanied by sexual maturation & cognitive, emotional, and behavioral changes. This change includes attachment patterns which can change emotional experiences about self, parents, and peers (Cooper *et al*., 1998). These transitional periods can bring up issues of independence and self-identity, increased self-understanding, identity exploration, and emotional changes are the hallmarks of adolescents' development. One of the fundamental socio-cognitive changes that make adolescence transition take a special developmental overtone is the emergence of heightened emotional responses.

Teenagers have a more sophisticated awareness of emotions than children (Casey, Jones, & Hare, 2008). Though there is no consensus among scholars as to how emotion regulation is measured and conceptualized, emotion regulation is the ability to modify one's emotional responses and conform to social norms and goal-oriented performance (Gross & John, 2003). Gottman, Conan, & Swanson (1998) also viewed adolescents as having the capacity to modulate their emotional reactions to other people in times of stressful situations. Emotion regulation generally refers to a deliberate attempt to modulate, modify, or inhibit actions and reactions toward a more adaptive end, altering inner states actively and intentionally to more desired rational choices among alternative courses of action (Thompson, 2010; Garner, 1995; and Barkley, 1997).

Although humans have an impressive capacity for emotion regulation, failures are common, and especially adolescents lose control of their emotions in a wide variety of circumstances. Such failures are impulsivity and numerous other poor social-psychological outcomes (Buckner *et al.,* 2003; ., 2006). Despite the importance of emotion regulation in adolescent's daily life situations, little is

known about its development, associated factors, and its overarching influence on other developmental aspects of adolescents. Several factors influence adolescent's capacity for emotion regulation. Of these, socio-demographic variables (gender, age & education level) and familial situations (family cohesion and adaptability) are notably associated with adolescent's emotion regulation. Even though the relationship between emotion regulation and gender is complex, a shred of evidence indicates that males and females differ in terms of emotion regulation as a result of the socialization process (Chaplin &Aldao, 2013). Concerning this, the majority of the studies found that girls tend to be better self-regulators than boys (Saarni *et al.,* 1999). Not only gender but also age is found to be an important factor for emotion regulation. Studies indicate that age is positively correlated with emotion regulation. That is, as age increases, the ability to modulate and direct emotional responses will at the same time increase and advance (Barkley, 1997; Saarni, 1999; Moilanen, 2007). Consistent with this idea, Barkley (1997) stated that during adolescence the prefrontal cortex experiences tremendous growth and this in turn helps them maintain awareness of their own and others' emotions, engage in regulation strategies, and develop plans to pursue personal goals.

Existing studies also indicated that adolescent's emotional regulation could also be determined by family structure. Family structure is a concept that indicates whether the family includes a single parent or two parents and whether the adolescent is biologically related to each parent. Studies unveil inconsistent findings as to how family structure relates to adolescent's emotion regulation. For example, Demo &Acock (1996) reported that adolescents in first-married families have slightly higher levels of emotion regulation than adolescents from single-parent families or stepfamilies. Amato (2005) also found that children growing up with two biological parents are more likely to better regulate their emotions than their peers from households with only one biological parent. On the contrary, Vandewater and Lansford (1998) found no statistically significant difference in emotion regulation among groups of adolescents with different family structures. Moreover, family cohesion (the emotional bonding that family members have toward one another) is also associated with adolescent's emotional regulation. Families with warm bonds and proper expressions of affection help adolescents to function well in their social environment and develop the capacity to regulate and modulate their emotions (Eisenberg, 2005; Ward & Zabriskie, 2011; Garner and Power, 1996).

The other most important gap that can be easily noticed in the majority of the studies of adolescent emotion regulation is the methodological gap. The majority of the studies conducted on emotion regulation are dominated by qualitative research orientations, characterized by interviews and a small number of study participants. Those studies with a quantitative research approach were not comprehensive. For example, Jabeen, Haque & Riaz (2013) in their study of adolescents' emotion regulation took their samples solely from early adolescent, middle-class families. It was very difficult to generalize the findings of these studies to the general population. Furthermore, the data was only collected from a private school excluding adolescent's public schools. Regarding local studies, there is very limited research that examines the associated factors of adolescents' self-regulation (Belay, et al, 2014) though not focused on family cohesion. Moreover, the majority of the studies regarding adolescent emotion regulation were carried out dominantly in Western societies (Jabeen *et al.,* 2013). Along with the arguments so far, we may need to examine the emotion-regulatory behavior of adolescents in the Eastern parts of Ethiopia and its associated factors.

Therefore, given the importance of the issue and because there are few studies carried out on this issue, with mixed and contradicting findings, the issue of adolescents' emotion regulation triggers a need to undertake further inquiry. Hence, the current study examined the factors contributing to adolescent emotion regulation in some selected secondary schools of Harari Regional State. These scholars also pinpointed that there was a latent necessity for documenting the development of emotion regulation processes in children and adolescents living in different countries with different social, psychological, and economic influences. Thus, to fill the gaps noted so far, this study tried to examine the factors contributing to adolescents' emotional regulation in some selected secondary schools of Harari Regional State of Eastern Ethiopia.

Research Question

This section dealt with the basic research question as follows.

1. Which of level parental education makes a difference in adolescents' emotional regulation?

2. What was the relationship between family cohesion, demographic variables (gender, age, and educational level), and adolescent emotion regulation in secondary school students of Harari Regional State?

3. What was the main and interaction effect of gender and family structure on adolescents' emotion regulation?

4. To what extent did age, gender, and family cohesion predict adolescents' emotion regulation in the area under the study?

Review of Related Literature

Gender as a Determinant of Emotion Regulation among Adolescents

The relationship between emotional development and gender is complex. Some studies have shown differences in male and female emotional styles are due to norms and socialization processes (Chaplin & Aldao, 2013). Emotional disparities are evident among males and females in that females are more of having emotional awareness and empathy, while, males are more confident, adaptable, optimistic, and use internal and cognitive drive mechanisms for managing emotion (Chaplin & Aldao, 2013). Regarding emotional disparities, different studies noted that girls tend to be better self-regulators than boys (Chaplin & Aldao 2013). There is also evidence of sex differences in emotion regulation. For example, boys have been found to use more avoidant emotional coping strategies than girls. There is evidence for gender-specific preferences in emotion expression and emotion regulation that seem not to start before middle childhood or adolescence (Chaplin & Aldao, 2013). Females more often report using social support, rumination, and primary control strategies. Males more often use avoidance or with increasing age passivity (Barkley, 1997).

In addition, for female adolescents, maternal behavioral control was significantly and positively related to limited access to emotion-regulatory strategies, and difficulties engaging in goal-directed behavior (Neuman & Koot, 2011). Even though very limited in number, studies were conducted in the local context. For instance, a study conducted in some selected junior secondary schools of Harari regional state, Ethiopia, by Amare (2019) evident that there is no statistically significant difference between males and females in their emotion regulation. Another study conducted in Addis Ababa reported inconsistent finding that states that there is a significant difference in emotion regulation concerning their gender, in favor of females (Belay, et al, 2014).

Age as a Determinant of Emotion among Adolescents

Adolescence is an age period with fast and fundamental alterations in biological, cognitive, social, and emotional domains (Lerner & Steinberg, 2009). During this developmental phase, many areas of life are accompanied by intense negative emotions in daily life (Silk, Steinberg & Morris, 2003) with often unstable peer or romantic relationships (Furman & Collins, 2009), and a decrease in perceived support from parents (Furman & Buhrmester, 1992). However, there is also variation within the adolescent period. In particular, early adolescence is characterized by a higher rate of conflicts with parents (Laursen, Coy, & Collins, 1998) and a higher variability of negative emotions compared to late adolescence (Larson, Moneta, Richards, & Wilson, 2002). In contrast to early adolescence, during middle adolescence the conflicts with parents become more emotional Laursen *et al.* (1998), and agreeableness and conscientiousness both decrease whereas neuroticism increases (Soto, John, Gosling & Potter, 2011). In particular, early adolescence is characterized by a higher rate of conflicts with parents and a higher variability of negative emotions compared to late adolescence (Larson *et al*., 2002).

In contrast to early adolescence, during middle adolescence, the conflicts with parents become more emotional agreeableness and conscientiousness both decrease whereas neuroticism increases (Soto *et al*., 2011). Emotion regulation includes all processes that are involved in changing current or expected emotional states regarding their intensity, quality, duration, speed of elicitation, and recovery in the service of adaptation (Thompson, 2010). Emotion-regulatory functions begin to develop during infancy and are influenced by individual temperament and endowment; as well as social factors such as caregiver-infant interactions and attachment (Kobak & Sceery, 1988). Emotion regulation abilities continue to increase as children develop through adolescence. During adolescence, the prefrontal cortex experiences tremendous growth, which stimulates the development of hindsight and forethought

(Barkley, 1997). These reflective skills allow adolescents to evaluate past and future events and support the development of more sophisticated plans.

The focus on peer relationships creates a heightened sensitivity to the evaluation of others, which may increase the intensity of certain self-conscious emotions such as pride or shame (Elkind & Bower, 1979). They also have a heightened awareness of the interpersonal consequences of certain emotional displays, which influence decisions regarding how they express their emotions (Fuchs & Thelen, 1988). For example, a decision to express emotion is more likely for adolescents when they anticipate a supportive reaction. Adolescence is a time where increased maturation and the need to navigate complex social interactions with peers and potential romantic partners become central developmental milestones. The ability to regulate emotions and manage emotional expression is important to establishing and maintaining relationships (Saarni, 1999). Therefore, the ability to recognize, label, and regulate their own emotions as well as accurately identifying the emotions of others and anticipating responses to emotional displays become key skills for successful development during this period and important preparation for transition into adulthood. A prominent use of and the maturation of adolescents' capability for regulating emotions makes adolescents a logical target population when developing a measure to understand the regulation strategies that are used to navigate emotions during a period filled with transition and increased environmental demands.

Parents' Educational Level as a Determinant of Emotion among Adolescents

Parental-level education is believed to be an important predictor so far as child development is concerned. In this respect, though not directly related to adolescents' emotional regulation, the parental level of education has important implications for adolescents' educational achievements. The family is the main factor influencing the lives and outcomes of students. A parent's educational level is a powerful factor influencing children's academic success. As Lazarus and Elizabeth, (1984) indicate, mothers' and fathers' level of education is statistically and significantly correlated with the child's performance. It has been established that generally, the educational level of parents is greatly connected to the educational attainment of their adolescents. This indicated that parents with more education are more involved in their adolescents' education though some uneducated parents are also involved in their children's education.

There are some studies conducted in Ethiopia that support this argument. For instance, the 2000 and 2005 Ethiopian Demographic and Health examined the role of parental-level education on adolescents' development through several pathways such as parental knowledge of health, maternal health-seeking behavior, family planning, and reproductive behavior. Their results indicate that parental-level education works through all paths except health-seeking behavior. To substantiate this further and how it might have been working with the young lives of adolescents over the last decade or so, we use parental level education as one of the most important grouping variables throughout the analysis. From the literature reviewed in this sub-section, it is possible to conceive that parental level of education has played an important role in student's academic success and motivation. Academic motivation and success are not similar to emotion regulation. However, the contribution of parental education that kinds of literature noted on different variables motivates this study to consider this particular study.

Family Structure as a Determinant of Emotion Regulation among Adolescents

Family structure is defined by whether the family includes a single parent or two parents and, among two-parent families, whether the adolescent is biologically related to each parent. These analyses consider family structure's associations with both caregiver and adolescent reports of the adolescent's concurrent physical health, behavior, and emotional well-being. In different research scholars try to see the various variables related to emotion regulation among these variables family structure was the major variable. Accordingly, Demo, and Acock (1996) reported that adolescents in first-married families have slightly higher levels of emotion regulation than adolescents from single-parent families or stepfamilies. Amato (2005) showed that children growing up with two continuously married parents are less likely to experience a wide range of cognitive, emotional, and social problems than their peers from households with only one biological parent. In contrast to the previously mentioned studies, Vandewater and Lansford (1998) found no emotional regulation differences between the investigated family structure groups.

Adolescents may receive less parental time and attention in both single-parent families and stepfamilies. Single parents appear to exert weaker control and make fewer demands on their children than married parents which leads adolescents to have low emotional stability in their environment (Thompson, 2010). Stepparents, on the other hand, generally provide lower levels of warmth and support to adolescents in comparison to their original parents. Research suggests that children and adolescents who spend time in these (single-parent and step-family types exhibit lower average levels of emotion regulation during both childhood and adulthood than do those who spend their entire childhood living with both of their biological parents (Amato, 2005). Recent investigations examine whether emotion regulation also differs by parental marital status for children living in two-parent families as well as by children's experience of family structure transitions. Research results showed that adolescents of the joint family systems were more emotionally mature as compared to those who live in the nuclear family system. A joint family system has a positive impact on emotionality and emotion stability increases with age.

Family cohesion as determinants of emotion adolescents

Family cohesion is the emotional bond that family members have toward one another. This is often reflected in supportive family involvement, family bonding, and family climate (Amato, 2005). This bounding enables families and adolescents to react to daily experiences in a more tolerant and flexible way (Thompson, 2010). Thus, emotion regulation has an important role in social adaption and functionality of family. Family members with this skill can discern when it is appropriate to express emotions immediately versus when it may be more appropriate to wait until the intensity of the situation is attenuated to address strong feelings. A strong bond between the family and child is important for family cohesiveness. Children are well-served when they feel a strong bond with the adults most responsible for their physical and psychological development (Lewis, Jones, & Barrett, 2008). Strong bonds with family members help teenagers to function well in their social environment like peers, parents, and teachers. In different research across several countries and cultural groups, family leisure is important to strengthening families (Ward & Zabriskie, 2011).

Another mechanism through which the family impacts children's emotion regulation is through the amount of emotion, both positive and negative, expressed verbally and nonverbally in the family. Most research on family expressivity has focused on parental expression of emotion. However, the emotional self-expression of each family member contributes to overall family expressiveness and the emotional climate of the family. There is a burgeoning amount of evidence suggesting that parental expression of emotion is related to children's socio-emotional development. Parental expression of positive emotion has been linked to children's pro-social behavior, social competence, emotion understanding, positive emotionality, and quality of the parent-child relationship (Eisenberg et al, 2003). Specifically, mild and moderate degrees of negative emotional expression may aid children in learning about emotions and emotional regulation by exposing them to a variety of emotions and how emotions can be managed. In contrast, high levels of negative emotional expression likely have a deleterious impact on children's development. Because of the distress caused by this level of negative expression, children not seeing their parent's model of successful regulation. There is also evidence that children of parents who are emotionally expressive in the family are more likely to be emotionally expressive themselves (Halberstadt et al., 1999).

Empirical Finding

Scholars and policymakers interested in work-life balance frequently lament that families do not spend enough time together. The concern over the lack of family time reflects a prevalent feeling in contemporary society that getting together has become a major challenge for many families because both parents and children are *extremely* busy (Buckner *et al*., 2003). The perception that families in which both parents are employed have scant time is troubling because family time is considered beneficial to family functioning and individuals' well-being. In this regard, research findings indicate that adolescents are engaged in risky behaviors like early age sexual engagement, and drug and substance abuse (Belay *et al*, 2014) this causes them to suffer from HIV/AIDS, unplanned pregnancy, and abortion research findings. However, the factors contributing to adolescents' emotion regulation were not particularly examined in the Ethiopian context. Therefore, there is a need to investigate if emotion-regulatory behavior can be lower among adolescent students in Harar, and if the associated

factors (age, gender, family structure, parental educational level, and family cohesion) would operate similarly in the Ethiopian (Harar) context.

Conceptual Framework

The framework presented below is developed based on the theoretical explanations and empirical findings reviewed so far in this chapter. Thus, determinants of emotion regulation among adolescents in Harari regional state secondary schools.

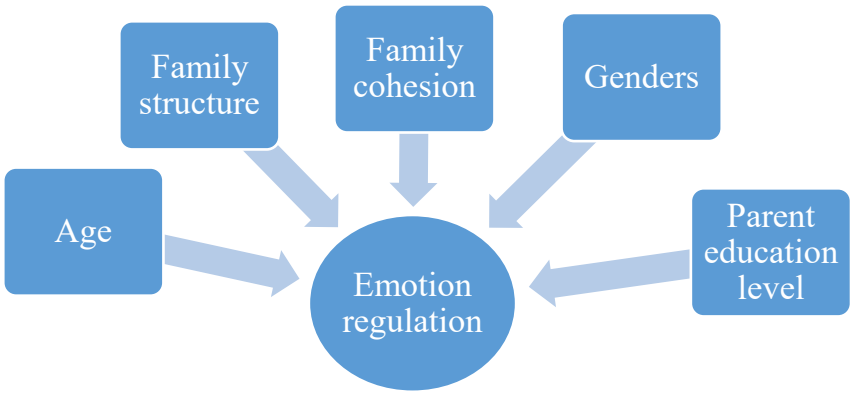


Figure 1. Factors Contributing to Adolescents' Emotion Regulation

Methods

A correlational research method design was employed to measure the relationship among age, family cohesion, family structure, gender, parental education level, and adolescent emotion regulation in Harari Regional State's secondary schools. Thinking that, this would best help fill the methodological gap inherent in existing literature and serve as a stepping stone to meaningfully address practical problems pertinent to the area. As many scholars in the field suggested, there is a multitude of issues that researchers need to consider while determining a research design since it is a glue print that holds all elements of the research together (Kothari, 2004). Accordingly, in this particular study, there is no way that the researcher assigns participants randomly to different groups, as there is no treatment component to be tested. This research design was chosen for its' appropriateness of the topic which primarily aims at examining the relationship between variables of interest. In terms of data collection, a cross-sectional approach was used.

The total number of secondary schools in Harari Regional State is 15. From fifteen general secondary schools (grades 9 to 10), seven were selected by using simple random sampling because simple random sampling gives an equal chance to all the schools. The total number of students from the seven selected schools is 1689. Thus, the researcher will take 323 (19 %) students once the researcher determines the sampling frame from all schools by using Taro 's formula. As the total number of participants to be included in the study, the population was stratified by gender. Regarding the selection of individual participants, a systematic random sampling technique was used to choose respondents from each stratum (males and females) because of comprehensive and representative of the population. According to Creswell's (2002) recommendation, it is possible to use a minimum sample size that detects moderate effect size with a 5-10 % level of significance for most research. In addition, the sample size by using a simplified formula of population proportion based on a 95% confidence level (Taro, 1967).

The researcher followed the procedures of Taro's (1967) formula to determine the sample size and it was indicated in the next formula. $n_i = \frac{N_i}{1 + N_i(\alpha^2)}$ where N_i is the total number of population; n_i is the total sample size to be included where α is the sampling error with α value of 0.05. Accordingly, the total sample size taken from the population is 323 as it was indicated below.

$$. n_i = \frac{N_i}{1 + N_i(\alpha)^2} = \frac{1689}{1 + 1689(0.05)^2} = \frac{1689}{1 + 1689(0.0025)} = \frac{1689}{1 + 4.2225} = \frac{1689}{5.2225} = 323$$

Out of the total target population, 1689, a total of 323 respondents were selected from randomly selected secondary schools of Harari Regional State as summarized below.

Table 1. Summary of participants selected from secondary schools

No	Names of Secondary Schools	Population (N_i)			Sample size (n_i)			Sampling techniques
		Male	Female	Total	M	Female	Total	
1.	Alhabesha	29	39	68	6	8	14	Stratified
2.	Bethelhem	76	99	175	15	19	34	Stratified
3.	Hamersa	308	217	525	59	42	101	Stratified
4.	Hira	18	37	55	3	7	10	Stratified
5.	Hi-tech	63	75	138	12	14	26	Stratified
6.	Lutheran	12	26	38	2	5	7	Stratified
7.	Shekib	356	334	690	68	64	132	Stratified
	Total	862	827	1689	165	158	323	

Self-reporting questionnaires were used as a major data-collecting instrument due to their convenience in collecting adequate information on the relationship between family cohesion and adolescent emotion regulation. The questionnaire has three major parts. The first part is composed of a series of questions prepared to assess the demographic variables; the second part is the family cohesion and adaptability scale that was used to examine family cohesion as perceived by adolescents and the third part is the emotion regulation questionnaire. Before the actual data was collected from the selected participant preliminary test was made. This test is used to check the reliability and validity of an item. As part of the research process, validating, standardizing, and contextualizing the instruments will be employed before trying to collect data from the actual study population.

FACES III (Family Adaptability and Cohesion Evaluation Scales III) is a measure of family functioning in terms of family cohesion and family flexibility. The instrument contains statements. Each item has five alternative responses: from 1 (Never to always). FACE III has internal consistencies that are fairly high r =.76 as well as high test-retest reliability r =.80. The Emotional Regulation Index for Children and Adolescents is a 17-item composed of three subscales. These are Emotional self-awareness, emotional control, and Situational Awareness of emotion. Respondents answer each item on a 5 –5-point Linker type scale ranging from 1(strongly disagree) to strongly agree (5). The original instruments in the English version were given to four judges from different backgrounds and educational qualifications. Before letting judges rate the items, raters were informed to think over two important points. One of which was to do the pools of items incorporated in the instrument measure the constructs under scrutiny (social adjustment and acculturation experiences of migrant returnees?). Therefore, for this particular question, respondents were requested to respond YES or NO. After, speculating on this, they were also informed to think over the strength of the items in measuring the aforementioned variables of interest. After the required data was collected, it was analyzed using SPPS version 20.

The data analysis involved both descriptive and inferential statistics. More specifically, the following methods of data analysis were employed. To organize and summarize data tabulation, mean, standard deviation, and percentage were used. To see the relationship between socio-demographics, family structure, family cohesion, and adolescent emotion30 regulation, Pearson product-moment correlation was used. Then to examine the effect of gender and family structure on adolescents' emotion regulation two ways ANOVA and one-way ANOVA were used to compare the mean difference between parental level of education and emotion regulation. To examine the effect size of variables (age, gender, and family cohesion) of interest on adolescents' emotion regulation multiple regressions were employed.

Results

Examining the association between socio-demographic variables (gender, age, educational level, and family structure) and emotion regulation was one of the major objectives of the current study. Accordingly, in the following subsequent sections of the chapter, the emotion regulation score was

statistically compared across the different levels of the independent variables (gender, age, educational level) were collected, and below was a tabular presentation of the socio-demographic characteristics of the participants. After the data clearance was made, the first thing that the researcher summarized was the socio-demographic features of the participants. In doing so, a total of 311(96.28%) cases were included among 323 (100%) in the current study whereas 12 (5.72%) cases were excluded because of the incompleteness of the returned questionnaires. As part of the socio-demographic variables, sample characteristics other than the study variables (gender, age, parents' educational status, and family structure) were collected, and below is a tabular presentation of these socio-demographic characteristics of the study participants.

Table 2. Summary of participants' personal information (n = 311)

Variables		Male		Female		Total	
		N_i	%	N	%	N	%
Family Education	Basic education	43	13.83	30	9. 65	73	23.47
	Elementary school	22	7.07	35	11.25	57	19.61
	Secondary school & above	86	27.65	95	30.55	181	58.20
	Total	151	48.55	160	51.45	311	100.00
Family structure	Nuclear Family	79	25.40	87	27.97	166	53.38
	Single parent family	40	12.86	27	8.68	67	21.54
	Step Family	16	5.14	18	5.79	34	10.93
	Extended Family	16	5.14	28	9.00	44	14.15
	Total	151	48.55	160	51.45	311	100.00

Table 2 indicates that the total number of participants was 311. Among these 160 (51.45%) were female and 151 (48.55%) of them were male respondents. Among all parents' level of education, the majority of them 181 (58.20%) were in Secondary and above followed by basic education 73 (23.47%) and elementary school 61 (19.61%). Regarding the family structure, participants of this study were from nuclear families 166 (53.38%), single parents 67 (21.54%), extended families 44 (14.15%), and stepfamilies 34 (10.93). Concerning the age of participants, the average age of the participants was 15.93 with a standard deviation of .98 and a range of 4 (14-18).

Table 3. A descriptive statistics of overall emotion regulation scale its sub-scale variables (N=311)

No.	Variables	Items	Range	Minimum	Maximum	Mean	SD
1.	Emotion regulation (ER)	17	33	43	76	52.26	8.62
2.	Emotional control (EC)	8	27	9	36	21.07	4.99
3.	Emotional awareness (EA)	5	20	6	26	16.31	3.58
4.	Environmental response (Env. R)	4	20	5	25	13.50	3.60

Table 4 indicated that the variables of interest of this study were emotion regulation (17 items) and its sub-scales (emotional control, 8- items; emotional awareness, 5 items; and environmental awareness, 4- items) with a five-point Likert scale. For all, descriptive statistics were computed and presented in the table. The computed mean and standard deviation scores of participants in the overall emotion regulation measure (M = 52.26, SD 8.62) were almost equal compared with the expected average (3*17= 51), maximum (5*17 = 85), and minimum (1*17= 17) scores. Therefore, visually inspecting the magnitude, emotion regulation scores among participants were similar. This means participants' level of emotion regulation is fairly good. Unlike in the overall emotion regulation measure, a slight mean difference was observed on the sub-scales. The participants' mean and standard deviation score on emotional awareness were (M =16.31; SD =3.58) and that of the environmental response were (M = 13.50; SD = 3.60) found to be slightly higher than the expected mean whilst a slightly lower score was observed on emotional control (M =21.07, SD = 4.99) compared to their expected means (3*5 =15), (3*4 =12) and (3*8 = 24) respectively. This result suggests that participants are better at emotional awareness and environmental response than emotional control.

Gender and Emotion Regulation

Before any parametric statistics were run, the dependent variable (emotion regulation) was tested whether or not it complies with the assumption of normality. To check this out, skewness and kurtosis z-values, Shapiro Wilk test p-value, histograms, and box plots were numerically and visually inspected. Hence the skewness and kurtosis z-values (the statistics divided by the standard error) were somewhere between -1.96 and +1.96. Accordingly, the emotion regulation scores were approximately normally distributed for both males and females, with a skewness of 1.53 (SE = .197) and kurtosis of 1.19 (SE = .179) for males and a skewness of .47 (SE = .192) and a kurtosis of 0.20 (SE =.891) for females. Moreover, the Shapiro Wilk test indicated that emotion regulation scores were approximately normally distributed, as the p-values for both males and females were above .05. It was also visually inspected in box plots and histograms that emotion regulation score was approximately normally distributed across gender, as the box plots were almost symmetrical and the curve in the histogram was bell-shaped.

Table 4. Comparison of emotion regulation scores across the parental level of education

No	Variables	N	M	SD	SV	SS	df	MS	F	Sig.
1.	Basic education	73	49.55	8.33	Between groups	860.57	2	430.29	5.16	0.01
2.	Primary education	67	51.54	9.63	Within groups	25687.26	308	83.40		
3.	Secondary & above education	181	55.70	8.30	Total	26547.83		310		
	Total	311	52.28	8.62						

After making sure that the assumption of normality is met, a one-way analysis of variance was computed to see if there exists a significant difference among the different educational levels of parents of the participants (basic education, primary education, and Secondary education and above) in terms of overall emotion regulation. Educational level is considered to be a factor for adolescents' emotion regulation, $F(2, 308) = 5.16$, $p < 0.05$. As variances and group sizes were Baunequal. The Games-Howell post hoc test was used to know where exactly the difference lies. Accordingly, post hoc comparisons of the Games-Howell test indicated that participants whose parents have secondary education and above (M = 55.70, SD = 8.30) were different in emotion regulation scores compared with participants from basic education (M = 49.55, SD =8.33) and primary education (M = 51.54, SD =9.63). On the contrary, the difference was not statistically significant for participants from basic education (M = 49.55, SD =8.33) and primary education (M = 51.54, SD = 9.63). Thus, the Games-Howell post hoc result concluded that adolescents whose parents have secondary education and above scored higher in the emotion regulation measure, which in turn is an indication that these groups of participants had better emotion regulation skills.

Table 5. Relationship among variables (sex, age, family cohesion, and emotion regulation (n =311)

No	Variables	1	2	3	4	5	6	7
1.	Sex (Male & Female)	1	.14*	-.08	-.06	-.10	-.04	.01
2.	Age		1	.06	.07	.10	-.01	.05
3.	Family cohesion			1	.84**	.59**	.72**	.61**
4.	Emotion regulation				1	.73**	.84**	72**
5.	Emotion control					1	.37**	.15**
6.	Emotion awareness						1	.64**
7	Environment regulation							1

** Correlation is significant at the 0.05 level (2-tailed).*

*** Correlation is significant at the 0.01 level (2-tailed).*

Table 5 shows that Pearson product-moment correlation was used to compute and identify the relationship among variables. Accordingly, predictors such as age and sex did not have any statistically

significant relationship with emotion regulation. However, family cohesion was found to have a positive and significant relationship with emotion regulation, r (309) = .84**, p<0.05. This means that the higher level of cohesiveness that a family develops would probably facilitate the likelihood of adolescents having higher emotion-regulatory skills. To summarize, family cohesion may have a predictive value on emotion regulation but on the contrary, age and sex did not have any significant relationship with emotion regulation.

Table 6. Male and female adolescents' emotion regulation scores by their family structure

No	Family structure	Emotion regulation								
		Male			Female			Total		
		N	Mean	SD	N	Mean	SD	N	Mean	SD
1.	Nuclear	79	62.01	8.63	87	64.51	7.82	166	63.26	8.23
2.	Single parent	40	50.76	8.82	27	53.04	10.89	67	51.90	9.86
3.	Stepfamily	16	43.94	7.02	18	46.75	8.55	34	45.36	7.79
4.	Extended family	16	47.13	7.09	28	49.71	10.12	44	48.42	8.61
	Total	151	50.96	7.89	160	53.50	9.35	311	52.26	8.62

Table 6 reveals that the mean and standard deviation (M = 62.01, SD = 8.63) of emotion regulation scores of males from the nuclear family structure is the highest followed by single-family (M = 50.76, SD = 8.82), extended family (M = 47.13, SD =7.09) while stepfamily (M = 43.94, SD = 7.02) is the lowest one. Like males, females' emotion regulation score from the nuclear family (M = 64.51, SD =7.82) is the highest followed by parent (M = 53.04, SD =10.89) and extended family (M = 49.71, SD =10.12). To determine whether this difference is significant or not and to see the interaction effect of the two main effects, two-way ANOVA was computed (Table 6).

Table 7. Main and interaction effects of sex and family structure on Adolescents' emotional regulation

No	Sources of Variation	Sum of Squares	df	Mean Squares	F	Sig.
1.	Corrected Model	2046.16	7	292.31	3.62	.001
2.	Intercept	532941.33	1	532941.33	6590.62	.000
3.	Sex	367.62	1	367.62	4.55	.034
4.	Family structure	1057.24	3	352.42	4.36	.005
5.	Sex * Family Structure	1354.75	3	451.58	5.59	.001
6.	Error	24501.67	296	82. 78		
7.	Total	562268.77	311			
8.	Corrected Total	26547.83	310			
R Squared = .77 (Adjusted R Squared = .76)						

As the two-way ANOVA results showed, there was a statistically significant sex difference, F (1, 310) = 4.55, p< .05) on the mean scores of male (50.96) and female (53.50) participants' emotion regulation in favor of females. The result suggests that gender affects adolescents' emotional regulation. Similarly, a statistically significant mean difference was observed, F (3, 310) = 4.36, p< .05 was also found on the mean score of participants' emotion regulation from nuclear (62.01) single parent (51.90), step-parent (45.36) and extended family (48.42) family structure. This indicates family structure has a significant effect on participants' emotional regulation. Likewise, as the factors (main effects) are significantly influencing emotion regulation, those factors are also producing significant interaction effect F (3, 310) = 5.59, p < .05, on emotion regulation.

Table 7. Scheffe's pairwise comparison test results in emotion regulation among adolescents from diverse family structure

No	(I)Family Structure	(J) family structure	Mean difference (I-J)	SE	*Sig.*
1.	Nuclear	Single parent	11.36	1.30	.000

		Stepfamily	17.90	1.69	.001
		Extended family	14.84	1.53	.012
2.	Single parent	Nuclear	-11.36	1.302	.000
		Stepfamily	6.54	1.89	.650
		Extended family	3.48	1.75	.995
3.	Stepfamily	Nuclear	-17.90	1.69	.001
		Single parent	-6.50	1.89	.227
		Extended family	-3.00	2.06	.296
4.	Extended family	Nuclear	-14.80	1.53	.012
		Single parent	-3.48	1.75	.101
		Step family	3.06	2.06	.295

Table 7 shows that there was a statistically significant mean difference between genders in adolescents' emotion regulation found in adolescents from nuclear and single-family structures. Likewise, there was a statistically significant mean difference in adolescents' emotion regulation from the nuclear family and adolescents from the family favoring the nuclear family. Furthermore, there was a statistically significant mean difference was found in adolescents' emotional regulation from nuclear and extended family in favor of again nuclear family. In general, as observed in the above pairwise comparison tests, the direction of group mean difference favors adolescents from nuclear family structure.

Table 8. Contributions of variables on emotion regulation

Effects	Standardized Coefficients (Beta)	R	R^2	t	*Sig.*
Family Cohesion	.84	.84	.7056	26.58	.001

Multiple regressions were conducted to determine the combined effects of all the predictor variables on emotion regulation. It was found that about 70.56% (R^2= .7056) of the variance in emotion regulation is explained by family cohesion. Thus, the variables other than those studied in this study accounted for 29.44% of the variability in adolescents' emotion regulation. The test of beta weights indicates among others, only family cohesion, $F (3, 310) = 238$, $p < .004$ makes a significant contribution to emotion regulation. In conclusion, family cohesion has a positive effect on emotion regulation. Family bonds and family togetherness are important for adolescent emotion regulation. No other variable could be entered in the further steps.

Discussion

This part deals with the discussion of the results of the study in comparison with other studies reviewed so far. It also provides general possible explanations for the findings. The major discussion topics are related to the research questions raised in the study. These include looking at the relationship between family cohesion and demographic variables, the main interaction effect of gender and family structure, and the predication value of age, gender, and family structure in emotion regulation. Among the research questions, one of the present studies posed was the relationship between family cohesion, demographic variables, and emotion regulation. Pearson's product-moment correlation was calculated to examine the relationship between the predictor variables (gender, age, family cohesion) and criterion variables (emotion regulation).

In the current study, gender does have a statistically significant relationship with emotion regulation. In comparing the means score females have better emotion regulation than males. Likewise, gender was found to make a significant difference in emotion regulation; supporting this study showing females being more emotion-regulated than males (Gottfredson and Hirschi, 1990). Furthermore, research stated studies found that girls tend to be better emotion regulators than boys. As mentioned, there is some variability in how females and males regulate their emotions, for example, females use different emotion regulation strategies to a larger degree than males (Shields & Cicchetti, 1997). Females have also been found to use both putatively adaptive and maladaptive emotion regulation strategies to a larger degree than males (Shields & Cicchetti, 1997). On the contrary, boys are likely to have more regulation difficulties and display more externalizing behavior compared to girls. In the

present study, age has no statistically significant relationship with adolescents' emotion regulation. This shows age has no contribution to adolescent emotion regulation. On the contrary, Laursen *et al.* (1998) show adolescence is characterized by a higher rate of conflicts with parents and a higher variability of negative emotions compared to adulthood. Emotional stability seems to be low during adolescence and is still not yet established during emerging adulthood. This emotional change shown during early and middle adolescence may be caused by biological changes with an increased reward dependency and intense hormonal influences. In supporting the findings Silk, Steinberg, and Morris (2003) found no age differences in the use of emotion regulation strategies from early to middle adolescence, whereas Zeman and Shipman (1996) reported more use of emotion regulation in 14-year-olds compared to 11- and 17-year-olds.

The result of the study indicated that family structure has a statistically significant effect on participants' emotion regulation. Likewise, as the factors (main effects) are significantly influencing emotion regulation, those factors are also producing significant interaction effects on emotion regulation. In support of this study, Demo and Acock (1996) have also stated adolescents in nuclear families have higher levels of emotion regulation than adolescents from single-parent families or stepfamilies. Similarly, Amato (2005) showed that children growing up with two continuously married parents are less likely to experience a wide range of cognitive, emotional, and social problems than their peers from single-parent families.

It might be because adolescents may receive less parental time and attention in both single-parent families and stepfamilies. Single parents appear to exert weaker control and make fewer demands on their children than married parents (Amato, 2005). In contrast to the previously mentioned studies, Belay *et al.* (2014); and Vandewater and Lansford (1998) found no differences between the investigated family structure groups. Furthermore, Stepparents, on the other hand, generally provide lower levels of warmth and support to children, in comparison to original parents, and may therefore not fully substitute for the original parent. Research suggests that children and adolescents who spend time in these (single-parent and step-family types exhibit lower average levels of emotion regulation during both childhood and adulthood than do those who spend their entire childhood living with both of their biological parents (Amato, 2005).

Parental-level education is believed to be an important predictor so far as child development is concerned. In this respect, though not directly related to adolescents' emotional regulation, the parental level of education has important implications for adolescents' educational achievements. The family is the main factor influencing the lives and outcomes of students. A parent's educational level is a powerful factor influencing children's academic success. As Lazarus and Elizabeth, (1984) indicate, mothers' and fathers' level of education is statistically and significantly correlated with the child's performance. It has been established that generally, the educational level of parents is greatly connected to the educational attainment of their adolescents' (Elizabeth and Lazarus, 1984). This indicated that parents with more education are more involved in their adolescents' education though some uneducated parents are also involved in their children's education. From the literature reviewed in this sub-section, it is possible to conceive that parental level of education has played an important role in student's academic success and motivation. Academic motivation and success are not similar to emotion regulation. However, the contribution of parental education is that literature.

Conclusions

From the results of the descriptive and inferential statistics, the following major points can be inferred.

- Among parental levels of education being a family member of high school and above, including grade nine to twelve through a university degree, makes a difference in adolescents' emotion regulation score.
- Females are more likely to have better emotion-regulatory skills than their male counterparts whereas, age does not have a significant relationship with adolescents' emotion regulation.
- Adolescents' whose families are cohesive enough in their lives are likely to have higher emotion regulatory skills than those of families who are not.
- Gender and family structure are important factors that could produce important effects both separately and jointly together on adolescents' emotion regulation. It is because of females and

nuclear family structure that the main effects produce separate and interaction effects on adolescents' emotion regulation scores.

- Family cohesion alone is an important variable among others that add up to the majority of the variability on adolescents' emotion regulation while age and gender are not able to predict emotion regulation. This means that family bonds and family togetherness are important for adolescent emotion regulation.

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