ORIGINAL ARTICLE

Types, Magnitude, Predictors and Controlling Mechanisms of Aggression in Secondary Schools of Jimma zone

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ABSTRACT

The objectives of the study was to investigate types, magnitude ,predictors of aggression and the methods that teachers used to control aggression in secondary schools of Jimma zone. A cross – sectional design was used for the study. A total of 663 secondary school students and 53 secondary school teachers participated in the study. Multi-stage sampling that involves simple random and stratified sampling techniques was used to select student participants. Accidental sampling techniques were employed to select teacher participants. Questionnaire that contained items on socio-demographic variables, scales on aggression, scales on parenting styles and scales on personality variables was used by the researchers to collect information from the students. A necessary data from the teachers were collected through close ended and open ended questionnaires. Interview and observation were also applied to collect data. One sample t- test , and step wise multiple regression analysis were conducted to analyze the data. The findings disclosed that physical ,verbal and indirect types of aggression were evident and students reported greater indirect aggression followed by verbal and physical aggression. The one sample t test ,however, indicated that the magnitude of each type of aggression was below average. Regarding the predictors of aggression, scores on the measure of perceived parental affection/warm   and agreeableness negatively predicted physical aggression whereas scores on neuroticism positively predicted physical aggression. Scores on the measure of perceived parental affection/warm ,sex, and agreeableness negatively predicted indirect aggression whereas scores on the measure of extravert and neuroticism positively predicted indirect aggression. It was also found out that scores on the measure of perceived parental affection/warm negatively predicted verbal aggression whereas scores on neuroticism positively predicted verbal aggression. Regarding the methods teachers used to control aggression , advising and handing over the aggressor to discipline committee were the most common methods reported. Some interviewed students, however, disclosed that threatening, insulting and time out were the methods teachers frequented most. The researchers also witnessed some forms of physical punishment in one school though physical punishment was not reported by the teachers and the interviewed students. Recommendations were also forwarded in the light of the findings.

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BACKGROUND

The development of one country entirely depends on its citizens and this responsibility particularly rests on its younger generation .As a result, one country needs to have a well developed generation in order to build the nation effectively in various spheres of development.

Well developed citizens in intellectual, social and psychomotor domains necessitate concerted effort from several parties. It goes with out saying that parents, schools, and the community play paramount role in cultivating the all rounded personality of its younger generation. Specifically ,schools could exert a tremendous effort in the process of socializing students and thereby they could minimize behavioral problems of students .

Behavioral problems in schools take different forms. Truancy, tardiness, insubordination, profanity, vandalism and aggression are worth mentioning. The causes for such behaviors are many in number. In addition to biological factors, the causes for misbehaving reside on parental rejection, poverty, viewing violence in the media, peers and gang influence and the frustration that accompanies low scholastic achievements (Gage and Berliner, 1998).

From the aforementioned behavioral problems, aggression in schools needs special attention since it affects student's proper development substantially in their schooling and later in life. Several researchers like Beck (2004); Block, Block and Keyes (cited in Bjorklund ,1992) indicate that children who are aggressive at early ages tend to show delinquent behavior during adulthood than those students who are not aggressive. In addition, students who are aggressive tend to score low in their academic achievement than those students who are not aggressive and tend to be poor in communication with their peer and teachers .

According to Weiten   (cited in Chen, 2003), aggression is action, i.e. attacking someone or a group. It can be a verbal attack: threatening or intimidating others, malicious teasing, taunting, name-calling, insults, threats, sarcasm, or attributing nasty motives to them. Or a physical attack: pushing, hitting, slapping, biting, kicking, hair-pulling, stabbing, shooting, and rape. Or it can be indirect attack :gossiping, spreading rumors, and encouraging others to reject or exclude someone.

Aggression, as any form of behavior, is influenced by many factors: family, peer, temperament, and so forth. Specifically , there are various variables that predict aggression. Parenting style, socio-demographic variables and personality traits are widely mentioned in the literature.

In Ethiopia there are some sorts of investigations in few areas of behavioral problems. For instance, Darge (2001) attempts to address the causes and extent of absenteeism in Secondary Schools of Addis Ababa and points out some factors that lead student not to attend class regularly. Seleshi   (2000) also attempts to investigate the relation between parenting style   and   misbehavior.   These investigations   are not conclusive   since they addressed only a   portion of misbehavior in one area.

To the present researchers' beliefs , various investigations are still needed in other areas of behavioral problems as the problems are rampant , vary in nature and

only little of the problem is explored. As a result , this study attempted to investigate the types, magnitude, predictors of aggression and methods that teachers use to control it in Secondary Schools of Jimma Zone .

STATEMENT OF THE PROBLEM

Aggression in schools exist in different types. Current researchers identified three type of aggression. According to Bjorkvist et. al (1992) these are physical, verbal and indirect aggression.

Various factors were repeatedly mentioned in the literature as predictor of aggression. The predictors of aggression, among others, were attributable to biological factors, socio demographic variables, parenting styles, personality and viewing violent films(Gage and Berliner, 1998). Scholars also identified some techniques that enable to minimize aggressive behaviors(Grohol , 2006).

Within these frames of references, the study uncovers the types, magnitude, predictors and methods that teachers use to control aggression in Secondary Schools of Jimma Zone . To this end, the study addresses the following research questions.

- Which types of aggression are prevalent among students of Secondary Schools of Jimma Zone?
- What is the magnitude of aggression in Secondary Schools of Jimma Zone ?
- How do grade level, age ,sex ,parenting styles, and personality types predict aggression in Secondary Students of Jimma Zone ?
- What type of controlling mechanisms teachers use to control aggression in Secondary Students of Jimma Zone?

OBJECTIVES

GENERAL OBJECTIVE

The general objectives of the study is to investigate the types of aggression, magnitude of aggression, predictors of aggression, and methods that teachers use to control aggressions in secondary schools of Jimma zone.

Specific Objectives

The specific objectives of the study are :

- To indicate which type of aggression are evident in Secondary Schools of Jimma Zone .
- To determine the magnitude of each type of aggression in Secondary Schools of Jimma Zone
- To investigate the relative importance of grade level, age, sex, parenting style, and personality type in predicting the various types of aggression in Secondary Schools of Jimma Zone
- To investigate the controlling mechanisms that teachers used to control aggression in Secondary Schools of Jimma Zone
- To put forward recommendations in the lights of the findings.

Operational Definitions

Physical Aggression: refer to students' actions that are intended to hurt other students . Hitting students, taking things from others and pushing others are some of the manifestations of physical aggression.

Verbal aggression : refers to students' actions that are intended to hurt others by means of verbal attack. Yelling at other

students, teases other students and insult other students are some of the manifestations of verbal aggression.

Indirect aggression: refers to students' actions that are intended to hurt other students by means of indirect attack. Shuts other students out of the group, ignores other students, gossip about other students, tells bad or false stories about other students are some of the manifestations of indirect aggression.

Perceived parental warm/affection: refers to students' perception of their parents how often their parents are advising for wrong acts ,rewarding for achievement, and loving.   Perceived   parental ineffective/hostile: refers to students' perception of their parents how often their parents use punishment, get angry, speak disapproval instead of praise, employ little control , offer   little reward for achievement.

Extraversion : refers to students' traits for preference and behavior in social situations. Students who scored high in measures of extraversion (above two and half on five point scales for this study coded 2) are energetic and seek out the company of others. On the other hand, students who scored low (below two and half on five point scales coded 1) are more quiet and reserved.

Agreeableness : this trait reflects how students tend to interact with others. Students who scored high in measures of agreeableness (above two and half on five point scales coded 2) are trustworthy, friendly and cooperative. On the other hand, students who scored low (below two and half on five point scales coded 1) are less cooperative and more aggressive.

Conscientiousness: this trait reflects how students are organized and persistent in pursuing their goals. Students who scored high in measures conscientiousness (above two and half on five point scales coded 2) are methodical ,well organized and dutiful. On the other hand, students who scored low (below two and half on five point scales coded 1) are less careful ,less focused and more likely to be distracted.

Neuroticism: this trait reflects the tendency of students to experience negative thoughts and feelings. Students who scored high in measures neuroticism (above two and half on five point scales coded 2) are prone to insecurity and emotional distress. On the other hand, students who scored low (below two and half on five point scales coded 1) are more relaxed, less emotional, and less prone to distress.

Openness: this trait reflects students' open -mindedness and interest in culture. Students who scored high in measures of openness (above two and half on five point scales coded 2) tend to be imaginative, creative, and to seek out cultural and educational experience. On the other hand, students who scored low (below two and half on five point scales coded 1) have less interest in art, and more practical in nature .

Secondary schools : in the present study secondary schools refer to those schools in Jimma zone that teach grade nine and ten students .

Limitations

 Lack of adequate local researches in the area of aggression is one of the limitations of this study. In addition, students might not report their true behavior of aggression .They might over report or under report the various forms of aggression. In addition to

this , many students did not respond to items that ask parental income, the types of films and for how long they viewed and items related to peer influences. As result, these important variables were excluded from the analysis.

METHOD AND MATERIALS

Design

A cross - sectional design was employed for the study. The independent variables of the study were indirect aggression, verbal aggression and physical aggression. The dependent variables of the study were grade level, age, sex, parenting style(perceived parenting affection/warm and perceived parenting ineffective/hostile)and personality trait (extraversion, agreeableness, conscientiousness, neuroticism and openness).

Population and Study Site

The population of this study were students and teachers which were engaging in the teaching learning process in secondary schools of Jimma zone. From these schools, four schools (Seto Semero, Serbo, Seka and Agaro High Schools) were selected by using lottery methods.

Participants: The total number of participants of the study were 663 (371 males, 282 females, 10 missing) students. This sample size was determined on the ground that to get an accurate and stable estimate of the population regressions equation, scholars advised to take 100 subjects per predictors (Osborne, 2000). 53 teachers also participated in the study.

Sampling Procedures

The selection of student participants involved multi stage sampling procedures. First stratified sampling was employed so as to take proportional samples from the different schools and sexes. Then simple random sampling technique was used to select the participants. Accidental sampling technique was used to select teachers.

Instruments: Questionnaires and interviews were used to secure information from the students. The language of the questionnaires was Amharic which was translated back and forth from the English version by the language instructors. The questionnaire has four parts.

The first part of the questionnaire consists of items that are intended to secure information on students' socio-demographic characteristics.

The second part consists of direct and indirect aggression scales (DIAS) which were adapted from Bjorkvist et .al (1992). DIAS measures three types of aggression :physical, verbal, and indirect. Seven items were included to measure physical aggression and hitting the other one, kicking the other one ,taking things from the other one were some of the items incorporated in the physical aggression subscales. The Chronbach's Alpha reliability estimate for the physical aggression scales was found to be .72. Five items were included in the verbal aggression subscale. Items like yelling or arguing with the other one , insulting the other one are among the items that comprised the verbal aggression subscale. The Chronbach's Alpha reliability estimate for the verbal aggression subscales was found to be .64.The indirect aggression subscale consists of twelve items. Shutting

the other one out of the group, becoming friends with another as a kind of revenge ,gossiping about the one he/she is angry with were few of the items included in this subscales. The Chronbach's Alpha reliability estimate   for the   indirect aggression scales is found to be .87. And for each subscale, students   rated their behaviors on four point scales ranging from very often (4), quite often (3), sometimes (2) to never (1).

 The third part of the questionnaire consists of   parenting style scales which were adapted from Abesha (1997). The adapted scales assess parent child interactions. The adapted scales consist of two subscales : one subscale measures how well parents are   warm/affectionate   and   the   other subscale measures how well parents are ineffective/hostile. The   first   subscales consists of nine items like my parents advice me for misbehaving ,rewarding for my   achievement,   and   loving   .   The Chronbach's Alpha reliability estimate for this scale is found to be .77.The second subscale consists of ten items such as my parents get annoyed, insult me, and less encouraging   and   coercive   .   The Chronbach's Alpha reliability estimate for this subscale is found to be .60. And students rated their parents on four point scales   ranging   from   very   true   of them(4),true of them (3),some what true of them(2) to not at all true of them(1) .

The last part of the questionnaire consists of the Five Factor Model of Personality scales   which   were   adapted   from Buchanan(2001). The scales measure five dimensions of personality :extraversion, agreeableness,   conscientiousness, neuroticism,   and   openness.   The   scales consist of five   items for agreeableness (respect others, insult people, accept people as they are); four items for openness(I believe in the importance of art, I am not interested in the importance of art ,avoid philosophical discussions) ;five items for conscientiousness(make plans and stick to them, pay attention to details, find it difficult to get down to work) ;seven items for extraversion (don't like to draw attention to myself ,make friends easily , don't talk a lot) and seven items for neuroticism (dislike myself, panic easily, feel comfortable with myself) . Students rated their personality on five point scales ranging from very typical of me (5), typical of me (4), undecided (3), not typical of me (2) to not very typical of me (1). The Chronbach's Alpha reliability estimate for extraversion,agreeableness, conscientiousness,   neuroticism,   and openness are 0.67, 0.53, 0.62, 0.76, and 0.55 respectively.

Similarly, the questionnaire for teachers consists of general information and rating scales which ask the type of aggression that are prevalent in the schools. Open ended questions were also presented to teachers to secure information on the methods   that   they   use   to   control aggression.

To substantiate and ensure the validity of the data secured on types of aggressions among students and methods that teachers use to control aggression, observation by the   principal   investigators   was   also employed. Interview was also conducted with some students so as to get accurate data on the methods that teachers use to control aggression in schools.

Pilot testing

Pilot testing was done on fifty five grade nine students from Jiren High School so as to compute the reliability estimates of the various scales and ensure the organization of   the   questionnaire.   The   reliability

estimates of the various   scales are computed and indicated above in the instrument section. The questionnaire was also subjected to expert analysis   for checking its wording , clarity, and content validity .Originally, the parenting scales consist of forty two items with the aim of using the four typology of parenting style. During the pilot testing, however, it was learnt that these scales were too bulky to be filled by students. As a result, this scale was reduced to nineteen items and the four typology of parenting style was reduced into   two: warm/affectionate   and ineffective/ hostile.

Procedures

After getting the consent from the directors of every selected school, data for the try out and main study were collected from Mar.16-Apr.20, 2006. During the data collection stage, the principal investigators assisted by five students who were from the school of Environmental Health ,JU. The questionnaire was administered to the participants in a specified room. The interview with some students was conducted by the principal investigators.

Observations were also conducted while administering the questionnaire and during students' break time. After collecting the data, the analysis were conducted using SPSS 12.0 version.

Analysis

Descriptive statistics   and a zero order correlation   between   variables   were presented. A one sample t test was used to see   whether   there   are   significant differences in various types of aggression and their estimated population means. Step wise multiple regression analysis was also conducted to determine variables that predict   the various types of aggression significantly. Textual   analysis was also employed for the interview .

RESULTS

The   general objective of the study is to assess the types , magnitude, predictors of aggression and what methods teachers use to control   aggression among   secondary students of Jimma zone. Accordingly, the following results were obtained.

Table one: Demographic characteristics of the participants

Demographic variables		Frequency	Percent
Sex	male	371	56.0
	female	282	42.5
Grade Level	ten	221	33.3
	nine	432	65.2

A set of items were presented to the respondents with the aim of securing information on the type of aggression that are prevalent in secondary students of Jimma zone. As the data disclose in table two, all forms of aggression namely indirect, verbal and physical are prevalent among the students of Jimma zone. To substantiate these findings, a set of items were also presented for teachers. Similarly, almost all teachers reported that the three types of aggression are fairly common among students. The researchers also observed some form of verbal aggression.

Regarding the magnitude of aggression, the findings indicate that secondary students of Jimma zone scored relatively high on the measure of indirect aggression (mean=1.703, std =.502)followed by verbal aggression(mean= 1.658, std= .539) and physical aggression (mean = 1.637, std=.543) . However, as the data clearly show in table two below, students report low level of indirect, verbal and physical aggression as compared to the expected population mean, i.e. 2.0 in each form of aggression.

Table two   : Descriptive statistics of   the continuous variables

Variables	Mean	Standard deviation (std)
Indirect aggression	1.703	.502
Verbal aggression	1.658	.539
Physical aggression	1.637	.543
Age	15.634	.453
Ineffective /hostile	2.710	.439
Affection /warm	3.716	.588

To determine whether the observed magnitudes in each form of aggression were significantly different from the expected population mean or not, a one sample t-test was employed.   Table three below reveals that   significant mean differences are observed between the hypothesized population means for each form of aggression and the sample mean of indirect, verbal , and physical aggression with a t-value of -14.468,-15.749   and -16.598 and at 597 ,616 and 615 degrees of freedom at .001 levels of significances respectively.

Table three: One sample t- test for the indirect, verbal and physical aggression

Variables	Mean	Standard deviation (std)	mean difference	t value	df	sig (2 tail)
Indirect aggression	1.703	.502	-.297	-14.468	597	.001
Verbal aggression	1.658	.539	-. 341	-15.749	616	.001
Physical aggression	1.637	.543	-.363	-16.598	615	.001

The other objective of the research paper is to pinpoint variables that significantly predict indirect, verbal and physical aggression. To accomplish this objective , step wise multiple regression analysis was conducted. First ,the zero order correlation coefficient was computed. Then, only variables that were significantly correlated with each of the dependent variable were fit in to the model of step wise regression analysis to test their prediction powers for each type of aggression.

The zero order correlation among indirect aggression, verbal aggression, physical aggression, age, sex (male coded 1, female coded 2), grade level (grade 9 students coded 1, grade 10   students coded 2), openness (low coded 1, high coded 2), conscientiousness   (low coded 1, high coded 2), extravert (low coded 1, high coded 2), agreeableness (low coded 1, high coded 2) neuroticism (low coded 1,high coded   2),   perceived   parental ineffective/hostile and warm /affection are presented in table four below.

Table four: Zero order correlations between variables

Variables	Indirect aggression	Verbal aggression	Physical aggression	Age	Sex	Grade level	Openness	Conscientiousness	Extravert	Agreeableness	Neuroticism	Ineffective/hostile	Warm/affection
Indirect aggression	1.000	.678**	.771**	.027**	.109**	.081*	-.091*	-.053	.107*	-.110**	.225*	-.051	-.430**
Verbal aggression		1.000	.687**	-.016**	-.074	.086*	-.090*	.005	.105*	-.038	.194**	-.071	-.392**
Physical aggression			1.000	-.009	-.092*	.072	-.127**	-041	.064	-.093*	.206**	-.083*	-.446**
Age				1.000	-.090*	-.165**	.010	.016	.015	.041	.049	.112**	-.013
Sex					1.000	.035	.060	.008	-.010	.043	.020	-.043	-.021
Grade level						1.000	.016	.016	.083*	-.043	.050	-.088*	-.086*
Openness							1.000	.067	-.082*	-.055	-108	.076	.157**
Conscientiousness								1.000	-.071	-.090*	-.030	.020	.048
Extravert									1.000	.045	-.092*	-.084*	-.116**
Agreeableness										1.000	-.167**	-.053	.016
Neuroticism											1.000	.133**	-.223*
Ineffective/hostile												1.000	.245**
Warm/affection													1.000

*. Correlation is significant at the .05 level (2 tailed)

**. Correlation is significant at the 0l level (2 tailed)

Regarding physical aggression, as the table indicates above, sex, scores on the measure of openness, scores on the measure of agreeableness, scores on the measure of neuroticism , scores on the measure of perceived parental ineffective/hostile and warm/affection related significantly with physical aggression. Sex, scores on the measure of openness, scores on the measure of agreeableness, scores on the measure of perceived parental ineffective/hostile and perceived parental warm /affection significantly negatively related with physical aggression(r= -.092, p<.05, r= -.127 p< .01, r= -.093, p < 05, r= -.083, p<.05 and r = -.446, p < .01) respectively. That means, male students displayed more physical aggression than female students; students who scored more on the measure of openness and agreeableness tend to show low level of physical aggression; and students who scored high on measure of   perceived ineffective/hostile and warm /affection are manifesting low level of physical aggression. On the other hand, scores on the   measure   of   neuroticism   was significantly positively associated with physical aggression(r=.206, p < 01). This association indicates that students

who scored high on the measure of neuroticism also scored high on the measure of physical aggression

Consequently,   a   stepwise   multiple regression analysis was conducted to determine significant predictors of physical aggression   taking   sex,   scores on the measure of openness, scores on the measure of agreeableness, scores on the measure of neuroticism and scores on the measure   of   perceived   parental ineffective/hostile and perceived parental warm/affection.

As table five shows, scores on the measure of perceived parental warm/ affection enter first in the model and explained 19 % of the variance in physical aggression ($F_{1, 528}$ = 126.658, $p < .001$) and   scores on the measure of neuroticism enter second in the model and explained a further 1.20 % ($F_{1,527 =}$ 68.726, $p <.001$) and scores on the measure of agreeableness enter third and explain a further .6 % ($F_{1, 526 =}$ 47.498, $p< .001$) in the prediction of physical aggression.   The   stepwise   multiple regression analysis reveals that scores on the   measure   of   perceived   parental warm/affection, scores on the measure of neuroticism and scores on the measure of agreeableness together explained 21 % of the proportion of the variance in physical aggression. On the other hand ,sex, scores on the measure of openness, and scores on the   measure   of   perceived   parental ineffective/hostile failed to predict physical aggression significantly.

Table five: Stepwise multiple regression predictor/correlation of physical aggression (only significant predictors are included)

Predictors	Summary	Sum of Squares	df	Mean Square	F	R^2	Sig.
Warm/affection	Regression	29.456	1	29.456	126.658	.192	.000
	Residual	122.795	528	.233			
	Total	152. 252	529				
Warm/affection and neuroticism	Regression	31.495	2	15.748	68.726	.204	.000
	Residual	120.756	527	.229			
	Total	152.251	529				
Warm/affection neuroticism and agreeableness	Regression	32.454	3	10.818	47.498	.209	.000
	Residual	119.798	526	.228			
	Total	152.251	529				

As shown in table six below, scores on the measure of perceived parental warm/affection and agreeableness negatively predict physical aggression(b=-.377, t = -10.451, P < .001and b=-.100, t= -2.051, p < .001 respectively) . On the other hand, scores on the measure of neuroticism positively predicted physical aggression(b=.125, t= 2.612 , p< .05).

Table six: Coefficients, t- tests and significance levels for predictors of physical aggression

Variables	Unstandardized coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Constant	2.802	.187		14.998	.000
Warm/affection	-.377	.936	-.415	-.451	.000
Neurosis	.125	.048	.105	2.612	.000
Agreeablenss	-.100	.049	-.080	-2.051	.040

Regarding indirect aggression, sex, students grade level, scores on the measure of openness, scores on the measure of extravert, scores on the measure of agreeableness, scores on the measure of neuroticism and scores on the measure of students perceived parental warm /affection significantly associated with indirect aggression. As indicated in table four above, sex, score on the measure of openness, score on the measure of agreeableness and students perceived

parental warm /affection negatively correlated with indirect aggression (r=- -.109, p < .01, r= -.091, p< .05, r= -.110, p < .01 and r = -.430, p< .01) respectively and student's grade level, scores on the measure of extravert and scores on the measure of neuroticism positively associated with indirect aggression (r= .081, p < .05, r=.107, p < 0.05 and r=.225, p < .01) respectively. To clarify the nature of the association, male students reported high level of aggression as opposed to females; students who scored high on the measures of openness and agreeableness scored low on measure of indirect aggression; and students who scored high on the measure of perceived parental warm/affection scored low on the measure of indirect aggression.

On the contrary, grade ten students scored high on the measure of indirect aggression than grade nine students and students who scored high on the measures of extravert and neuroticism also score high on the measure of indirect aggression.

Consequently, a step wise multiple regression analysis was conducted considering only just the mentioned independent variables that are significantly correlated with indirect aggression. Table seven below discloses that in the step wise multiple regression analysis, scores on the measure of perceived parental warm/affection entered first in the model and explain 19 % of the variation in indirect aggression ($F_{1, 522}$ = 123.182, p < .000). Scores on the measure of neuroticism enter second in the model and further explain 2.5 % of the variance in indirect aggression ($F_{1, 521}$ = 71.032 ,p < .000). Sex of the student enters third and adds only 1.2 % in the model ($F_{1, 520}$ = 40.658, p < .000). Scores on the measure of extraversion enter fourth and add .6 % in the model ($F_{1, 519}$ = 38.547 , p < .000). Scores on the measure of agreeableness enter last and add only .7 % for the model ($F_{1, 541}$ = 14.846, p < .001). The step wise multiple regression analysis discloses that scores on the measure of perceived parental warm/affection, scores on the measure of neuroticism, sex, scores on the measure of extraversion, and scores on the measure of agreeableness significantly predict indirect aggression. The proportion of variance in indirect aggression that are accounted for by the combined effect of the five variables was found to be 24 %. On the other hand, student's grade level and scores on the measure of openness contribute nothing for the model.

**Table seven: Stepwise multiple regression predictor/ correlation of indirect
 aggression (only   significant predictors were included**)

Predictors	Summary	Sum of Squares	df	Mean Square	F	R^2	Sig.
Warm/affectionate	Regression	24.939	1	24.939	123.182	.189	.000
	Residual	105.682	522	.202			
	Total	130.621	523				
	Regression	27.986	2	13.993	71.032	.214	.000
Warm/affectionate &	Residual	102.635	521	.197			
neuroticism	Total	130.621	523				
	Regression	29.088	3	9.696	40.658	.223	.000
Warm /affectionate	Residual	101.533	520	.195			
neuroticism,& sex	Total	130.621	523				
Warm /affectionate	Regression	29.918	4	7.479	38.547	.229	.000
neuroticism &	Residual	100.703	519	.194			
extraversion	Total	130.621	523				
Warm/affectionate	Regression	30.744	5	6.155	31.930	.236	.000
neuroticism, sex,	Residual	99.847	518	.193			
extraversion &	Total	130.621	523				
agreeableness							

As indicated in table eight below, scores on the measure of perceived parental warm/affection , sex of students and scores on the measure of   agreeableness negatively predict indirect aggression (b=-.332, t = -9.904, P < .001, b=-.038, t = -2.236 ,p < .05 , and b=-.094, t = -2.107, p < .05 respectively). Scores on the measure of neuroticism and extraversion positively predict indirect aggression (b=173, t =3.873, p < .001 and b= .078, t = 2.209, p < .001) respectively.

Table eight: Coefficients, t -tests and significance levels for predictors of indirect aggression

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Constant	2.450	.209		11.698	.000
Warm /affection	-.332	.034	-.393	-9.904	.000
Neuroticism	.173	.045	.156	3.873	.000
Sex	-.038	.017	-.091	-2.236	.026
Extraversion	.078	.036	.086	2.209	.028
agreeableness	- .094	.045	-.082	-2.107	.036

The last dependent variable that was considered for analysis was verbal aggression. As depicted in table four above, grade level, scores on the measure of openness, score on the measure of extraversion, score on the measure of neuroticism and scores on the measure of students perceived parental warm/affection significantly correlate with verbal aggression. Students grade level, score on the measure of   extraversion and neuroticism positively relate with verbal aggression(r=.086, p < .01, r=.105 p < .05 and r = .194 p < .01) respectively and scores on the measure of openness and scores on the measure of perceived parental   warm/affection negatively associate with verbal aggression (r= - .090, p < .01 and r= -.392, p < .01). The nature of associations disclose that grade ten students scored high on the measure of verbal aggression than grade nine students; students who scored high on the measures of extravert and neuroticism also scored high on the measure of verbal aggression. On the other hand, students who scored high on measures of openness and perceived parental warm/affection scored low on the measure of verbal aggression. Subsequently, a step wise multiple regression analysis was used to pinpoint the variables that significantly predicted verbal aggression. Table nine shows that scores on the measure of perceived parental warm/affection entered first in the model and explain 16.5 % of the variance in verbal aggression ($F_{1, 535} = 105.683$, p < .000).   The second variable that was entered in the model was scores on the measure of neuroticism. Scores on the measure of neuroticism explain a further 1.3 %   in the model ($F_{1, 534} = 105.863$, p<.000). The proportion of variance in verbal aggression that is accounted for by the combined effect of the two significant predictor variables was found to be 18

%.On the other hand, grade level, score on the measure of openness, and score on the measure   of extraversion fail to predict verbal aggression significantly and excluded from the model.

Table nine: Stepwise multiple regression predictor/ correlation of verbal aggression (only   significant predictors were included)

Predictors	Summary	Sum of Squares	df	Mean Square	F	R^2	Sig.
Warm/affection	Regression	25.349	1	25.349	105.863	.165	.000
	Residual	128.105	535	.239			
	Total	153 .453	536				
Warm/affection and neuroticism	Regression	27.388	2	13.694	58.008	.178	.000
	Residual	126.065	534	.236			
	Total	153.453	536				

Table ten below also discloses that score on perceived parental warm/affection significantly and negatively predicted verbal aggression (b=-.346 , t= - 9.468, P < .001). On the other hand, score on the measure of neuroticism significantly and   positively predicted verbal aggression (b=.141 ,t=2.939, P, <.05).

Table ten: coefficients, t -tests and significance levels for predictors of verbal aggression

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Constant	2.518	.158		15.497	.000
Warm/affection	-. 346	.037	-.381	-9.468	.000
Neuroticism	.141	.048	.118	2.939	.003

High   school   teachers   were   also incorporated as   participant of the study and they gave important information about the issue at hand. .As indicated at the beginning of this section, almost all the sampled teachers responded that all forms of aggression were seen in the school compounds. However, they also rated the extent of each form of aggression as fairly minimum. High school teachers in the selected school were also asked about what type of controlling mechanism they use whenever   they   encounter   students' aggression . The responses are listed below in descending order of how often a certain method was used by the selected teachers.

- advising the wrong doer
- handing over the wrong doer to discipline committee and then taking the necessary measure
- consulting with parents
- expelling from class
- informing   the   school administration

The researchers of this study   also attempted to interview some students in some schools on the methods that teachers use to correct aggressiveness.   All the interviewed students replied that teachers do not employ physical punishment   but they responded that some sort of threatening , insulting and time out were the most frequent methods teachers employ to correct aggressiveness . The main researchers also observed some type of verbal and physical aggression among students while we were administering the questionnaire and during break time. The researchers also observed some form of physical punishment in one class, as instance, some students were kneeling down in one class. The researchers also witnessed that the guard men usually carry a club/stick and when the researchers asked its purpose, they said that it helps to threaten students. Otherwise, it will be difficult to manage students.

DISCUSSIONS

One of the objectives of the study is to investigate which type of aggression is prevalent in secondary students of Jimma zone. As indicated in the analysis and result part, all forms of aggression (physical, indirect and verbal) are fairly common among students of secondary students of Jimma zone. Teachers also indicated that such types of aggression are seen among students. The researchers also observed mild forms of verbal and physical aggression in the schools. These findings are consistent with the findings of other researchers.   In the cross-cultural   study that investigated the attitude of American and Japanese students toward interpersonal aggression, Fujihara et.al (nd) found that physical aggression, verbal aggression, and indirect aggression were evident in both American and Japanese participants in

defensive situation but the magnitude differs.

Regarding the magnitude of aggression in grade nine and ten students of Jimma zone , it was found that indirect aggression is relatively higher than verbal and physical aggression. Verbal aggression is also found to be higher than physical aggression. Though these findings are in agreement with some researchers, the findings are equivocal . The magnitude of displaying which type of aggression differ from place to place and the situation that triggers aggression. In this regard , Fujihara et.al (nd) discover that relative to the Japanese, the Americans show greater indirect aggression, and low level of verbal aggression in general. But as Fujihara et.al (nd) indicate the situation seems to play a grater role and found that relative to Japanese, the Americans are more physically aggressive in defensive situations.

A number of justification could be presented for the differences that exist among the three forms of aggression in the present study.

One possible justification for students of grade nine and ten for showing greater indirect aggression and verbal aggression lies on social learning theory. According to this theory, people can imitate much of the behavior around them. Currently, as the researchers observed the students, such types of behaviors (particularly, the verbal aggression) are rampant and usually left unchecked in the school and the community at large. It is common to hear grade nine and ten students of the target schools talking nasty words, teasing, threatening, criticizing peoples in vain and such forms of behaviors are contagious and could poison other students. As a result,

such acts of indirect and verbal aggression could be intensified among the secondary students of Jimma zone.

The second justification lies on the ability of grade nine and ten students to express aggression through indirect and verbal means as their stage is characterized by greater development in language usage and thinking ability. The developments in these area could shift physical type of aggression to indirect and verbal aggression. As Lagerspetz, Bjorkqvist, and Peltonen; Bjorkqvist, Lagerspetz, and Kaukiainen, (citedin Bjorkqvist, 1994)   explained when verbal skills develop, verbal means of aggression tend to replace physical ones whenever possible. For the indirect aggression ,their justifications reside on the development of social skills. They noted that when social skills develop, even more sophisticated strategies of aggression are made possible, with the aggressor being able to harm a target person without even being identified.

In addition to the Justification /explanation given above, the other explanation for the participants of the study for showing the lowest level of physical aggression relative to indirect and verbal aggression lies on the assessment of risk by the aggressor .The aggressor are cognizant that the victims of aggression are usually less tolerant for physical aggression and they might fight back for such type of assault .One research found out that when in conflict, the individual makes his/her choice of aggressive strategy after an assessment based on the effect/danger ratio (Bjorkqvist, 1994): The objective is to find a strategy as effective as possible, while at the same time exposing the individual to as little danger as much as   possible. According to this finding, aggressors usually consider a strategy that inflict minimum damage up on them. Therefore,

secondary students of Jimma zone might select the indirect and verbal aggression since they are less dangerous than the physical one.

 The other objective of the study is to investigate factors that predict the various forms of aggression.

It is discovered that scores on the measure of perceived parental warm /affection , neuroticism and agreeableness predict physical aggression significantly.

Scores on the measure of perceived parental warm /affection negatively predict physical aggression. These finings are consistent with other researchers. A large body of researchers relate warm /affectionate parenting with children prosocial behavior. As instance , parents who are accepting ,warmer, and helpful will have children that are less involved in antisocial behavior (Baumrind,1967,1971; Bryant and Crockenberg,1980 ,cited in Kuczynski ,1997,Chen, 2001). Specifically, Patterson (cited in Bjorklund,1992) indicates   that maternal warmth and guidance are negatively associated with aggression.

Similarly, scores on   the measure of agreeableness   negatively   predict aggression . This finding is consistent with Heaven (cited in Buchanan et .al, 2005). Heaven indicates that   scores on   the measure of agreeableness are associated with interpersonal violence although it did not directly refer to physical aggression.

On the other hand, it was found out that scores on the measure of neuroticism positively predict physical aggression. This finding was also in agreement with the existing literature. Scholars (for example, Buchanan, 2001) often equate this trait as it

reflects the tendency to experience negative thoughts and feelings. This trait might lead neurotic students to be irritated very easily and manifest physical aggression.

Several variables failed to predict physical aggression significantly. Some studies show that punitive parenting style as the best significant predictor of aggression (for example ,Patterson cited in Bjorklund,1992). In this study , however, it was found that ineffective parenting do not predict physical aggression. This finding is also similar to (Hotton,2003). Hotton found out that even if most of the participants are from families that practice punitive techniques, the participants do not develop aggressive behavior. The reason for this might be that important factors might be there that counterbalance the impact of the punitive techniques. Several researches have also shown the importance of sex in predicting physical aggression (for example , Hetherington & Park, 1993) . These findings have not supported the present study. The possible reasons might be that its effect is masked by perceived parental affection/control or the past researchers used global measure of aggression instead of subdividing aggression as indirect ,verbal and physical.

Concerning indirect aggression, scores on the measure of perceived parental affection /warm, scores on the measure of neuroticism ,sex, scores on the measure of extravert and scores on the measure of agreeableness predict indirect aggression significantly.

Scores on the measure of perceived parental affection/ warm, sex and scores on the measure of agreeableness negatively predict aggression. As indicated   in the discussion of physical aggression, scores on the measure of perceived parental

affection/ warm and agreeableness negatively predict those antisocial behaviors such as indirect aggression and these findings are also consistent with the findings of Patterson (cited in Bjorklund,1992) and Hotton (2003) respectively. Here sex of the student predict indirect aggression significantly. This finding is consistent with the finding of Fujihara et.al (nd). Fujihara and others discover that   males engaged in more indirect aggression than females. Several researches, on the contrary to the present finding , report that indirect aggression are more common in females than males and they also remind the importance of cultural variation in utilizing indirect strategies of aggression (Cook cited in Bjorkqvist , 1994). Therefore , the possible explanation for why male students in the target schools tend to show more indirect aggression than females might reside on societal norms. The norm of the society in which the study is conducted might be less tolerant towards women for indirect verbal aggression or might encourage males to display such type of act .

On the other hand, it was found that scores on the measures of neuroticism and extravert   positively predict physical aggression. It was found that scores on the measure of neuroticism positively predict indirect aggression .This finding is also in agreement with the existing literature. As indicated above, scholars (for example , Buchanan, 2001) often equate this trait as it reflects the tendency to experience negative thought and feelings. This trait might lead neurotic students to be irritated and manifested indirect aggression. Similarly, scores on the measure of   extravert positively predict indirect aggression. This trait reflects preference for and behavior in social   situations   (Buchanan,2001).The possible explanation for why students who scored high on extravert tend to be

aggressive might be that they frequently wish to get attention of others. This is to say that   by   engaging in indirect aggression, they might quench their thirst for the attention of others.

Concerning verbal aggression, scores on the   measure   of   perceived   parental warm/affection and neuroticism are found to be significant predictors of verbal aggression in the target schools, These findings are also consistent with the findings of   Patterson   (cited   in Bjorklund,1992) and Buchanan, 2001). Patterson found out that scores on the measure   of   parental   affection/warm negatively predict antisocial behaviors such   as   verbal   aggression.   Similarly, Buchanan (2001) pointed out the tendency of people with neuroticism to get mad very easily and manifest aggresstion. The rest of the independent variables fail to predict verbal aggression significantly for the same reasons given above in the discussion for the physical and indirect aggression.

It was also found that teachers in the selected high schools have not practiced the proper way of handling aggressiveness . As they responded, they advise students and take some forms of disciplinary measures. It is not clear what type of advise they offer to the aggressors.   Current researches, however, have pointed out some form of effective techniques of handling aggression. As Grohol   (2006) pointed out that the most effective programs are those that help students to learn key social skills such as listening, thinking about the feelings of others, working cooperatively and being assertive in constructive ways. Myton (cited in Grohol, 2006) also noted that the majority of aggressive children are choosing to use that behavior because they don't have the skills to achieve what they wish to achieve any other way.

Some students were also interviewed about the methods that teachers use to control the various types of aggression. Most of the interviewee responded that some sort of threatening , insulting and time out are the most frequent methods teachers employ to correct aggressiveness. The researchers also observed some forms of physical punishment in one school. As Grohol, (2006); Myton (cited in Grohol, 2006) recommended   such techniques are not effective to minimize aggression. They also added that school could design an effective program that teach aggressive students the basic social   skills such as listening, thinking about the feelings of others, working cooperatively and being assertive in constructive ways because aggressive students lack skills in communication.

Conclusions and Recommendations

Conclusions
Aggressive behaviors in young children are of considerable interest because of its implications for future behavior and adjustment. With regard to this, researchers have found links between aggression and poor outcomes in life. These outcomes may include aggression, delinquency, crime in adolescence and adulthood; poor school results; unemployment in adulthood; and other negative circumstances. In addition those children who are both bullies and victims   appear   to   suffer   more psychological difficulties than do others. Victims appear to suffer social isolation and depression at higher rates than their peers, even after the bullying has stopped. However, the outcomes of aggression can be minimized if the factors that contribute to it are detected and design programs that help aggressive students .

To this end, the objectives of this study were to investigate the types, magnitude, predictors and   what   methods   teachers

used to control aggression among grade nine and ten students of Jimma zone. This paper, however, has got some limitations. Some of the limitations were the sampled students might not report their true behavior. They might over report or under report the various forms of aggression .In addition to this, many students did not respond to items that ask parental income ,duration and type of films they viewed and items related to peer influences. As result, these important variables that could have predicted aggression were excluded from the analysis. In spite of these limitations, the following major findings were discovered.

It was found that physical aggression ,verbal aggression and indirect aggression were evident in grade nine and ten of Jimma zone .Specifically, students showed greater indirect aggression followed by verbal and physical ones but the various forms of aggression were found to be low.

The study also discovered that scores on the measure of perceived parental warm /affection , neuroticism and agreeableness were significant predictors of physical aggression of the student. On the other hand, grade level, age, scores on the measure of   perceived   parental ineffective/hostile, scores on the measure of   extraversion,   agreeableness, consctiousness,   and openness did not predict significantly physical aggression. Sex of the students, scores on the measure of   perceived parental warm/affection, scores on the measure of   neuroticism, scores on the measure of extraversion and scores on the measure of agreeableness were found to predict indirect aggression significantly. Other variables like grade level, age, scores on the measure of perceived parental ineffective/hostile, scores on the measure of   consctiousness

and   openness failed to predict indirect aggression. Score on the measure of perceived parental warm/affection and scores on the measure of   neuroticism predicted verbal aggression significantly. The rest of the considered independent variables did not predict verbal aggression in the target schools.

An   attempt was also made to find out what type of methods teachers used in minimizing aggression among students. They mentioned various methods. Among the methods, it was learned that advising was used by almost all teachers   in conjunction   with handing   over the aggressor to discipline committee and taking the necessary measures. Students also responded that some forms of threatening, insulting and time out were the   common   methods   that   teachers employed. The researchers also observed some forms of physical punishment were used by teachers in one school.

Recommendations

This research explored the   various types and magnitude of aggression that   were   evident   in   grade   9 students of Jimma zone. It also pinpointed various variables that predicted   the   three   types   of aggression and the methods that teachers used to control aggression. In the light of these findings, the following   recommendations   are forwarded.

- Parents should be aware to be affectionate, accepting and helpful   for their children

- Awareness should be created among students

who are neurotics and extravert and score low on the measure of agreeableness in order to enhance their communication skills.

- Male students should get the priority for the intervention for indirect aggression.
- Teacher should be aware about the correct way of handling aggressive behaviors.
- . Future researches should consider other variables like income , for how long and the types of films students view , peer influence and the four   typology of parenting   styles so as to test in what way these variables predict the various types of aggression.

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