# Predictors Of Aggressive Behavior Among Adolescent Boys In Zagazig City

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## ABSTRACT

**Background**: Aggression is a global challenge and a leading cause of death and disability worldwide. Several studies indicate that the reasons for aggressive behavior during adolescence are multifactorial. The existing study **aimed to** investigate the predictors of aggression among adolescent boys in secondary school students in Zagazig City. **Subjects and Methods**: A descriptive cross sectional research design was used to fulfill the aim of the present study. A sample of 280 male students contributed to the current study, through a predesigned questionnaire form composed of three parts, socio demographic characteristics, GRAD scale and Aggression Questionnaire. **Results**: Study results revealed that aggressive behavior is prevalent among slightly more than one third (34%) of the students, where hostility occupied the top level (48.6%) followed by verbal aggression analysis highlighted that the most significant factors affecting the risk of aggression among adolescents were the family risk, school climate, peer relations and mass media. **Recommendations**: Study recommended that Counseling being aims at helping students resolve their numerous problems or concerns to change their undesirable behaviors.

Key words: Aggressive behavior, Adolescent boys, Risk factors

#### INTRODUCTION

Recently, aggression become a global public health concern, challenge and a leading cause of death and disability worldwide. It accounts for over 1.6 million deaths per year, at least 16 million cases of injury severe enough to receive medical attention in hospitals, and untold suffering for tens of millions of individuals (WHO, 2007). Moreover, aggression places a heavy burden on health systems, particularly emergency services, consuming scarce staff time and clinical resources (blood supplies, operating theatre time, rehabilitation, etc.) that are needed to deal with other, less avoidable conditions (WHO, 2008).

Prevalence rates of physical fighting and other forms of violence in low- and middle-income countries- especially those experiencing social and political instabilityremain elevated and, in some instances, are increasing. In response to this concerning trend, there has been a call for concerted public health efforts to reduce violence among adolescents worldwide (**Krug et al.**, **2002; & OECD, 2011**).

Aggression among adolescents has gained the attention of those in the field of mental health, prevention experts, media and school authorities. Most of the aggression cases occur in school setting (Sagayam & Wong, 2010). The instances of aggression include bullying, spreading rumours, hitting and hurting. The increment in adolescent aggressive behavior during the last decade has intensified the search for predictors of aggressive behaviors (Shaheen, 2015).

Several studies indicate that the predictors of aggressive behavior during adolescence are multifactorial such as being victim of violence, viewing television, computer use, environmental and socioeconomic variables, family harsh environment and community deprivation (Horman et al., 2005). In recent years, substantial gains have been made in understanding the influence of **family** behaviors and styles on adolescent emotional and behavioral outcomes. Disruptions in family processes such as a lack of a warm, loving parent/child relationship, may negatively impact child/adolescent development (Hoskins, 2014).

In relation to mass media, supporting evidence indicates that the viewing of violent television shows is associated with aggressive fantasizing in boys and other research indicates that imagining oneself taking a particular action increases one's intentions to take such action. Furthermore, media violence research has found that children who actively imagine themselves as the violent characters in their media diet are also the ones most likely to behave aggressively (Konijn et al., 2007).

Additionally, the function and importance of **peer group** are crucial throughout the adolescence period. Adolescents who experience peer delinquency may behave in an aggressive way (Faris & Ennett, 2012). According to Steketee (2012), high association with delinquent peers is significantly linked to problem behavior. Peer delinquent influences aggression among adolescents can be explained through peer pressure.

A robust body of research links positive school climate relations between students and teachers and among students to lower levels of emotional and behavioral problems, including externalizing problems (Kuperminc et al., 2001). Additionally, Henry et al. (2011) indicated that school factors including norms about behavior and climate, consistently have been shown to be important in understanding behavioral and academic outcomes. These findings suggest that the school environment also may play an important role in risk for relational aggression.

Aggression among adolescents might lead to serious negative consequences both to the victims and the aggressors. The victims might experience social rejection as peers might refrain from interacting with them to avoid being threatened by the aggressors. In addition. the victims mav develop psychological and personality disorder, experience physical injury and death and show poor academic performance (Chee-Leong, 2006).

Consequently, there is a need for collaboration among parents, nurses, teachers, guidance counselors, psychologists, social workers, and other stakeholders to join hands in the fight against all forms of aggressive behaviors manifested by the adolescents, adolescents prevent from engaging in aggressive behavior and enhance understanding of aggression and to device effective interventions (Obikeze & Obi, 2015).

# Significance of the study

In Egypt adolescents constitutes nearly 20 million and hence represent a substantial proportion of the country's human potential. They are exposed to the many of the same risk factors that predispose to aggression and criminal behaviour elsewhere in the world (Wahdan et al., 2014). Egyptian youth are exposed to liberal behavioral models through the Internet and media that are associated with poorer parental relationships, and lower levels of academic commitment (Shehata & El-Shenawy, 2010).

Beyond physical injuries, the health effects of aggression include disabilities, depression, reproductive and physical health problems, high-risk sexual behaviors and alcohol and drug misuse behaviors that link experiences of aggression to a host of other chronic problems and early death (WHO, 2014). Community health nurse play a curacial role in promotion of mental health, prevention of mental disorders through early detection, implementation of effective interventions and treatment as well as management of mental, emotional and behavioral disorders (National Association of School Nurses [NASN], 2008).

#### Aim of the study

The aim of the current study was to investigate the predictors of aggression among adolescent boys in Zagazig City.

#### **Research** questions

- 1. What is the prevalence of aggressive behaviors among adolescent boys?
- 2. What are the kinds of aggressive behaviors manifested by adolescent boys?
- 3. What are the predictors (contributing factors) to aggressive behavior among adolescent boys?

### Subjects and methods

**Research design and setting:** A descriptive cross sectional design was selected to achieve the aim of the study. Where one governmental secondary school (Millitary secondary school for boys) from secondary schools of males in Zagazig city was selected using simple random sampling technique.

### Subjects:

A sample of 308 (sample size 280 besides 28 as pilot) secondary school male students residing in the study setting during the time of data collection.

#### Sample size:

The sample size is estimated to determine an aggression rate of 68% or more (**Obi & Obikeze**, **2013**), among school children with a 15% precision and a 95% level of confidence. Using the single proportion equation for dichotomous variables (**Brown and Hollander, 1977**). Accordingly, the estimated sample size is 232 school children. This will be increased to 280 to account for a non-response rate of about 15%.

### Data collection tools:

The researchers designed a three parts self administered questionnaire form for data collection. Its first part covered respondents' socio-demographic characteristics as age, school grade, family size, residence, parents' education, job, and income and mass media.

The second part consisted of selected domains of the Global Risk Assessment Device (GRAD) scale, version 1.0 developed by Gavazzi et al. (2003). The domains of risks selected to determine the factors possibly affecting aggressive behavior were family (16 items), deviant peer relationships (13 items), and school education (13 items). The response to each item was on a 3-point Likert scale "No/Never," "Yes/a couple of times," and "Yes/a lot" depending on how much each item applies to respondent's life. These are scored "0" to "2" respectively, so that a higher score reflects a greater risk in each domain. The item scores of each domain were totaled by simple summation and divided by the number of its items to compute a risk score for each domain ranging between 0 and 2. Evidence of the psychometric properties of the GRAD has been demonstrated in studies that demonstrated high internal reliability, concurrent validity (Gavazzi & Lim, 2003), and gender and race/ethnicity differences (Gavazzi et al., 2006).

The third part was the Aggression Questionnaire (AQ) developed by Buss and Perry (1992). The current study used the modified Arabic form which was translated into Arabic by Abd-Allah and Abo-Abah (1995), Cronbach Alpha (0.853). It is a selfreported measure that consisted of 30 items and four subscales: physical aggression (9 items), verbal aggression (6 items), anger (7 items), and hostility (8 items). Participants were asked to rate each item using a 5 - point Likert - type scale (1 = uncharacteristic ofme, 5 =very characteristic of me). Overall score (range, 30-150, midpoint 90), Physical aggression scale (range 9-45, midpoint 27), Verbal aggression scale (range 6-30, midpoint 18), Anger aggression scale (range 7-35, midpoint 21) and Hostility aggression scale (range 8-40, midpoint 24).

## **Pilot study:**

It was carried out on 10% (28) to test the feasibility of the study and the clarity of the questionnaire, and to estimate the time needed for data collection. Since, those students who participated in the pilot study were excluded from the main study sample.

# Fieldwork:

Prior to the start of field work, the researchers seeked official permissions from the undersecretary of Ministry of Education the director and of East Zagazig administration, sharkia governorate, Egypt. By gaining the final letter of authorization the researcher met the director of school to plan for data collection process. Data were collected during February to the end of March 2016, using predesigned self administered questionnaire form. Classes were selected randomly with the assistance of school's social specialist. All students were asked for voluntary participation, and the objectives of the study were explained. The questionnaire was taken collectively during a normal class day. The researcher stayed in the classroom to answer any specific questions that arose while students completed

the self-report. It took about 20 to 25 minuts for the student to fill in the questionnaire.

# Ethical considerations:

The research was conducted within the framework of ethical rules. Written permission was taken before the study from authorized personnel. The aim of the study was explained to students and they were given the opportunity to refuse the participation. Also students were assured that the information would be confidential and used for the research purpose only. The researcher assured maintaining anonymity and confidentiality of subjects' data.

## Statistical analysis

Data were collected, reviewed, coded, and entered into the computer. Statistical analysis was done using the Statistical Package for Social Science (SPSS) version 14. Suitable statistics were used such as frequency distribution and Linear regression analysis was done to predict the independent predictors of aggression. t and 95% confidence intervals were calculated.

# Results

Table 1 displays the socio-demographic characteristics of the study subjects. As seen in the table, the mean age of students is 15.89±0.588 years, 71% belong to urban areas, being the first or the last child was the most frequent birth order as reported by 34.3% for each birth order, and around two thirds (66.4%) belonged to high social class.

**Figure 1** portrays Types of aggressive behavior among adolescents. The figure represents that aggressive behavior is prevalent among slightly more than on third (34%) of the students, where hostility occupied the top level (48.6%) followed by verbal aggression, anger, and physical aggression (43.6%, 36.4% & 27.5%) respectively. **Table 2** clarifies family risks as predictor to aggressive behavior among adolescent boys. About one third of them having difficulty and conflict with adults in the home (31.4% & 26.8%) respectively.

**Table 3** reveals school climate risks as predictor to aggressive behavior among adolescent boys. More than half of the study sample (52.1%) experienced difficulty in school. and 41.4% of them enrolled in special education classes.

**Table 4** clarifies friends' risks as predictor to aggressive behavior among adolescent boys. About half of them (47.5%) preferred to hang around with friends who are older than them. One third (31.1%) of them got into trouble with friends.

Table 5 presents best fitting linear regression model for aggressive behavior. It indicates that family and media imitation, friends, school education, father age and education were statistically significant independent positive predictors. Conversely, residence, social class, mother age and were statistically significant education negative predictors. independent The regression model explains 16% variation in aggression score as indicated by r-square value.

### Discussion

The examination of factors associated with aggressive behavior among adolescent boys is a high interesting area of research in educational Systems. The current study findings reaveled that approximately one third of students were **aggressive**. On the same way, the reported prevalence rate of physical fighting among sample of Egyptian adolescents (31%) was similar to reported rates in high-income countries (**Eaton et al.**, **2012**), in Turky and other middle-income countries globally (**Rudatsikira et al.**, **2008**).

On the contrary, Obi and Obikeze (2013), in Nigeria (2011-2013), found a total of 6,580 (68%) Secondary School Students were involved in 2,996 violence incidents in the 257 public secondary Schools. The report showed that occasional harm was (63.7%), bullying/threatening/interference (21.3%) and gossiping/nicknaming (15%). A total of 13 violent incidents resulting in death occurred at schools within a 1-year period. Study results showed that the highest form of aggression among study sample was hostility while the lowest was the physical aggression. These results reflected the characteristics of this period of life. Conversely, Obi and Obikeze (2013), found that adolescents frequently manifest physical aggressive behavior such as bullying, beating, hitting, knife attack.

Multiple regression analysis highlighted that the most significant factors affecting the risk of aggression among adolescents were the family risk, school climate, peer relations and mass media. These results underline the importance of those predictors in developing aggressive behaviors.

In relation to the impact of family in developing aggressive behavior, numerous researchers found associations between higher levels of inconsistent discipline and more behavior problems. For example, inconsistent discipline, relative to more consistent discipline, has been associated with problematic psychological adjustment of adolescents, such as depression and anxiety (**Dwairy, 2008**). Adolescents' aggressive and noncompliant behavior is reinforced when parents engage in an inconsistent discipline practice when the parent makes a request, the adolescent responds negatively, and the parent backs down.

Literature has provided strong evidence that the **school climate** has a powerful effect on physical aggression. There is also evidence that more positive student–teacher relationships promote lower levels of aggression (**Henry et al. 2011**). On the same way, **Chang (2003)** emphasized that teacher warmth and quality of relationships with students have been associated with greater student rejection of aggressive behavior.

On this context, **Pung et al. (2015)** found that there were significant positive relationships between **peer delinquency** and aggression among adolescents. The result also indicated that low self-control has an indirect effect on aggression through peer delinquency. According to **Platje et al.** (**2013**), peer delinquency is significantly correlated with adolescents' aggression. The result showed that both of the rule-breaking and aggressive peers had significant correlations with adolescents' aggression.

This finding is consistent with the study of **Steketee (2012) in Utrecht**, Netherlands, who found that high association with delinquent peers is significantly linked to problem behaviour. Moreover, **Brauer and Coster (2015)** emphasized that association with delinquent peer might cause adolescents to value the negative belief system and eventually involve in behaviour unacceptable by the society. According to **Miller (2010)**, high peer delinquency will lead to aggressive behaviour because adolescents will act in similar ways to their delinquent peer. These adolescents may experience peer pressure.

Regarding the effect of mass media, the results of the current study agrees with results from 15- year follow-up in United States which suggest a delayed effect of violence on serious media physical aggression. The researchers found significant correlations between television violence viewing during childhood and a composite measure of aggression (physical, verbal, and young during adulthood indirect) (Huesmann et al., 2003).

The second longitudinal study was reported by **Ihori et al. (2003)**. They studied Japanese fifth and sixth graders at two points in time separated by 4 to 5 months, measuring overall video-game exposure rather than exposure to violent video games. They reported that amount of exposure to video games was positively (and significantly) related to later levels of violent physical behavior after controlling for earlier violent behavior. Moreover, **American Academy of Pediatrics (2009)** declared that after decades of research a clear finding emerges: violent media exposure is a causal risk factor for increases in aggression).

the effect of Moreover, sociodemographic characteristics of the families on the risk of aggression among adolescents was elaborated by several factors, mainly father age and education, were positively affecting aggressive behavior, i e : aggressive behavior increased with older age of father and high level of education. While, mother education and age, residence, and social class were negatively affecting aggressive behavior. Similarly, Lvnam et al. (2009) mentioned that demographic characteristics is the most commonly risk factors for youth or juvenile delinquency. On the contrary, in Alexandria, Egypt, Wahdan et al. (2014) emphasized that living in urban/slum areas, low level of education/occupation, parents' were associated with risk of aggression/violence.

# Conclusion

The study showed that about one third of male adolescents frequently manifest aggressive behaviors in their interaction. The highest exhibited aggressive behavior among the males was hostility while the lowest was physical harm. Results indicated that family and media imitation, friends, school education, father age and education were statistically significant independent positive predictors. Conversely, residence, social class, mother age and education were statistically significant independent negative predictors.

#### Recommendation

Future studies using both qualitative and quantities designs should focus on the determination of the risk factors of aggressive behavior among adolescents and their families. Counselling being aims at helping students resolve their numerous problems or concerns to change their undesirable behaviors.

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Characteristic	No	%
Age:		
Mean±SD	15.89±0.588	
Residence:		
<ul> <li>Rural</li> </ul>	81	29
<ul> <li>Urban</li> </ul>	199	71
Birth order:		
<ul> <li>First</li> </ul>	96	34.3
<ul> <li>Middle</li> </ul>	81	28.9
<ul> <li>Last</li> </ul>	96	34.3
<ul> <li>Only</li> </ul>	7	2.5
Father age:		
■ <45	45	16.1
■ 45+	218	77.9
<ul> <li>Dead</li> </ul>	17	6
Father education:		
<ul> <li>Illetrate/read &amp; write</li> </ul>	32	11.4
<ul> <li>Elementary</li> </ul>	34	12.1
<ul> <li>Secondary</li> </ul>	46	16.5
<ul> <li>University/ post graduate</li> </ul>	168	60
Father job:		
<ul> <li>Not working</li> </ul>	3	1.1
<ul> <li>Farmer / worker</li> </ul>	12	4.3
<ul> <li>Craft</li> </ul>	23	8.2
<ul> <li>Business</li> </ul>	39	13.9
<ul> <li>Employee</li> </ul>	109	38.9
<ul> <li>Professional</li> </ul>	94	33.6
Mother age:		55.0
<ul> <li>&lt;40</li> </ul>	87	31
■ 40+	192	68.6
<ul> <li>Dead</li> </ul>	1	0.4
Mother education:	I	0.4
<ul> <li>Illetrate/read &amp; write</li> </ul>	45	16.1
<ul> <li>Elementary</li> </ul>	22	7.9
	72	25.7
<ul> <li>Secondary</li> <li>University/ post graduate</li> </ul>	141	50.3
	141	50.5
Mother job:	171	61.1
	171	61.1
Working	109	38.9
Social class:		
Low	15	5.4
<ul> <li>Middle</li> </ul>	79	28.2
<ul> <li>High</li> </ul>	186	66.4

# Table 1: Sociodemographic characteristics of the study subjects (n=280)

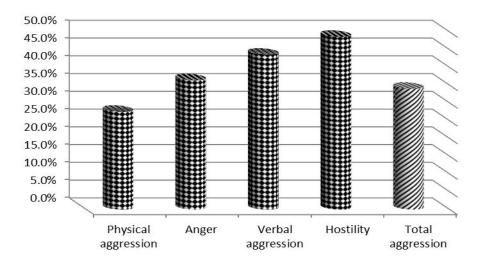


Figure 1: Types of aggressive behavior among adolescents (n=280)

Risk		ever	Yes a couple of times		Yes alot	
		%	No	%	No	%
Family         Mean ± SD         4.75±         4.4						
• Are any adults in the home in conflict with this you?	210	75	41	14.6	29	10.4
Do adults in the home have difficulty in keeping track of you?	195	69.6	54	19.3	31	11.1
Are you not welcomed to stay in home?	244	87.1	22	7.9	14	5
<ul> <li>Are you at risk of harm or in eminent physical danger in home?</li> </ul>	269	96.1	5	1.8	6	2.1
Do adults have to come down hard on you (i.e. harsh punishment)?	238	85	35	12.5	7	2.5
<ul> <li>Do physical altercations result between adults in the home and you as a result of the family's misbehavior?</li> </ul>		95.4	9	3.2	4	1.4
<ul> <li>Do adults in the home get into verbal shouting matches with you?</li> </ul>		82.9	35	12.5	13	4.6
<ul> <li>Do you have self controle after you have been punished? **</li> </ul>		24.6	73	26.1	138	49.3
<ul> <li>Do family members seem to take extra care not to upset you? **</li> </ul>		9.3	59	21.1	195	69.6
<ul> <li>Do adults in the home tip toe around you in order not to upset them? **</li> </ul>		17.1	46	16.4	186	66.5
Is there too much conflict or fighting between you and your siblings?		73.6	54	19.3	20	7.1
Do adults in the home find it easier to do things themseves instead of asking you to do them?		51.8	73	26.1	62	22.1
<ul> <li>Is the quality of your relationship with your mother/primary female caregiver poor or non- existent?</li> </ul>		92.9	16	5.7	4	1.4
Is the quality of your relationship with the your father/primary male caregiver poor or non-existent?	250	89.3	19	6.8	11	3.9
Is the family experiencing financial hardship?	216	77.1	53	19	11	3.9
Is the family at-risk for homelessness?	264	94.3	7	2.5	9	3.2

Table 2: Family risks as	predictor to	aggressive behavior	among adolescent	boys (n=280)
	<b>F</b>		8	

\*\* Reverse question

Table 3: School climate risks as predictor to aggressive behavior among adolescent boys (n=280)

	No/Ne	ver	Yes a co	ouple of	Yes alot		
Risk				times			
		%	No	%	No	%	
School Mean ± SD 4.61± 3.8							
<ul> <li>Are you experience academic difficulty in school?</li> </ul>	160	57.1	84	30	36	12.9	
<ul> <li>Are you experience difficulty with your behavior in school?</li> </ul>	134	47.9	83	29.6	63	22.5	
Do you have difficulty getting to school/or staying in school for the entire day?	182	65	51	18.2	47	16.8	
<ul> <li>Are you in conflict with any teachers at school?</li> </ul>	213	76.1	39	13.9	28	10	
<ul> <li>Do you miss school frequently due to family responsibilities (sibling care, etc.)?</li> </ul>	180	64.3	61	21.8	39	13.9	
<ul> <li>Does the school requisted your gaurdian because you have been disruptive in class?</li> </ul>	253	90.3	19	6.8	8	2.9	
<ul> <li>Does the school called home because you have been disruptive in class?</li> </ul>	270	96.5	4	1.4	6	2.1	
<ul> <li>Do you frequently interrupt classroom activity (excessive talking, unable to control yourselfe physically, etc.)?</li> </ul>	228	81.4	42	15	10	3.6	
<ul> <li>Are you in danger of dropping out of school?</li> </ul>	235	83.9	27	9.6	18	6.5	
Are you behind one or more academic years in school?	275	98.2	3	1.1	2	0.7	
<ul> <li>Does you have difficulty reading and/or writing?</li> </ul>	275	98.2	2	0.7	3	1.1	
<ul> <li>Is there any evidence to suggest the you may have learning problems?</li> </ul>	215	76.8	49	17.5	16	5.7	
<ul> <li>Are you enrolled in special education classes?</li> </ul>	120	42.9	44	15.7	116	41.4	

(n=280)	No/Never		Yes a couple of		Yes alot	
Risk	No	%	times No	%	No	%
Friends Mean ± SD 6.41± 3.3						
Do you not have any same sex friends?	184	65.7	15	5.4	81	28.9
Do you not have a best friend or confidante?	174	62.1	46	16.4	60	21.5
<ul> <li>Do you prefer to hang around with friends who are older than you?</li> </ul>	57	20.4	90	32.1	133	47.5
<ul> <li>Are you prefere to have friends who are older/younger (by four or more</li> <li>years)?</li> </ul>	119	42.5	97	34.6	64	22.9
<ul> <li>Do you get into trouble (at school, with the police, etc.) with friends?</li> </ul>	81	28.9	112	40	87	31.1
Do you have frequent conflict with your friends?	168	60	95	33.9	17	6.1
<ul> <li>Do you associate with others who are known to be gang involved or are loosely associated with a gang?</li> </ul>	262	93.6	9	3.2	9	3.2
<ul> <li>Do you report that you are gang involved or has been identified as being gang involved by law enforcement?</li> </ul>	275	98.2	1	0.4	4	1.4
Do you have contact with other young persons who get into trouble with the law?	248	88.6	24	8.6	8	2.8
<ul> <li>Do you have longstanding arguments with same age friends?</li> </ul>	157	56.1	90	32.1	33	11.8
<ul> <li>Do you frequently lie, gossip, and/or spreads rumors about your friend?</li> </ul>	221	78.9	55	19.7	4	1.4
• Are you cruel or do you bully your friends?	230	82.2	41	14.6	9	3.2
<ul> <li>Do you refuse to bring friends home to meet adult family members?</li> </ul>	204	72.9	49	17.5	27	9.6

Table 4: Friends risks as predictor to aggressive behavior among adolescent boys (n=280)

predictor	Unstandardized Coefficients		Standardized Coefficients	t-test	P-value	95% Confidence Interval for B		
	В	Std. Error				Lower	Upper	
Constant	.527	.181		2.913	.004	.171	.883	
Father age	.040	.049	.048	.804	.422	057	.136	
Mother age	031	.062	031	500	.617	154	.092	
Residence	180	.065	172	-2.789	.006	307	053	
Birth order	.049	.033	.092	1.492	.137	016	.114	
Father education	.023	.040	.053	.575	.565	056	.103	
Father job	005	.031	012	161	.872	067	.057	
Mother education	010	.037	027	284	.776	083	.062	
Mother job	.066	.059	.068	1.112	.267	051	.182	
Social class	067	.093	083	721	.471	250	.116	
Family	.435	.108	.236	4.042	.000	.223	.646	
School climat	.070	.087	.047	.799	.425	102	.242	
Friends	.074	.076	.056	.962	.337	077	.224	
Media violence	.156	.055	.164	2.845	.005	.048	.263	

### Table 5: Best fitting linear regression model for aggressive behavior

r-square=0.162

Model ANOVA: F=3.968, p<0.001