



Predictive Factors Contributing to Violent Behavior in Adolescents



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adolescents;
external factors;
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violent behavior;

Abstract

Purpose: This study investigated the predictive factors that influence violent behavior in adolescents in Gorontalo City because is the leading and most common problem in society, increasing the death rate in adolescents yearly. Violent behavior is caused by various factors internal and external. Method: This quantitative study employed a cross-sectional study of 217 junior high school students aged 11-15 years. Results: The results of the bivariate test showed that the p-values were 0.001 self-control, 0.008 self-efficacy, 0.001 self-concept, 0.001 stress, 0.001 parenting, 0.002 peers, and 0.001 the school environment. Thus, all variables have a significance value smaller than the p-value (<0.05), meaning that all variables affect violent behavior in adolescents. Conclusion: all variables have a significant effect on violent behavior in adolescents. Nursing professionals are expected to be able to recognize symptoms and prevent the occurrence of violent behavior in adolescents to reduce its negative impact.

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1 Introduction

Violent behavior in adolescents is a significant problem and the most common in society, increasing the annual mortality rate in adolescents. Violent behavior is a condition in which a person takes actions that can physically harm himself/herself, others, and the environment. Violent behavior such as abuse or physical violence needs to get more attention since it is the leading cause of adolescent global death.

Based on data from Statistics Indonesia, Gorontalo Province ranked first nationally in physical abuse during 2018 (14.31%), followed by DI Yogyakarta (13.93%) and Kep. Bangka Belitung (12.02%). According to the US Centers for Disease Control and Prevention, deaths due to violence among adolescents were ranked fourth globally (5.5%) in 2013 (Kann et al., 2018).

Violent behavior results in negative impacts, such as low learning achievement (Bruc et al., 2019) and bad social interaction with peers (Bleize et al., 2021). Other impacts include anxiety, depression, legal problems, psychological and emotional traumatic reactions, panic, phobias, depression poor social interactions, and helplessness. The more severe impact is psychotic symptoms the risk of suicidal behavior (Du et al., 2018), and is the leading cause of global morbidity and mortality (5.5%) in adolescents (Mokdad et al., 2016). Violent behavior can be caused by internal and external conditions.

This study aims to determine the predictive factors contributing to violent behavior in adolescents in Gorontalo City. The results are expected to provide information related to decision-making in determining interventions to prevent adolescent violent behavior.

2 Materials and Methods

Design

This quantitative study employs a cross-sectional approach, an epidemiological study on the prevalence, distribution, effect, and exposure of disease by simultaneously observing the exposure status, disease, or other outcomes in individuals from a population.

Population and sample

The population is adolescents aged 10-19, selected by Cluster Random Sampling. The sample consisted of 217 early adolescent junior high school students aged 11-15 years with the criteria of being willing to be respondents, domiciled in the Gorontalo City area, and living with their primary family.

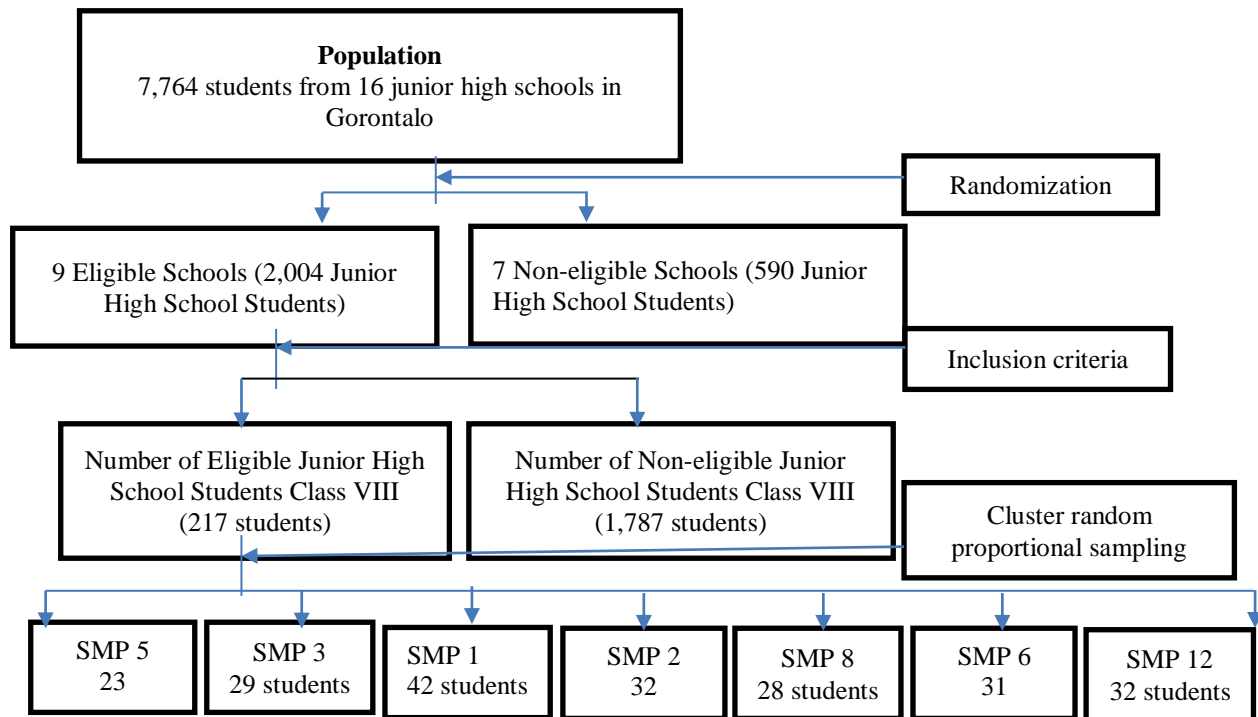


Figure 1. Population and sample

Research ethics

The study proposal has passed the ethical test from the Faculty of Nursing Ethics Committee, Universitas Indonesia, with the number: Ket-232/UN2.F12.D1.2.1/PPM.00.02/2021. The study applies the fundamental ethical principles of autonomy, beneficence, maleficence, and justice. No ethical problems were found during the study process.

Data collection tools and procedures

Self-Control Scale (SCS), The self-control variable was measured using the Self-Control Scale questionnaire by Tangney, Baumeister, and Boone. **Emotional Self Efficacy Scale (ESES)**, The measuring instrument for self-efficacy uses the Emotional Self-Efficacy Scale (ESES) developed by Kirk et al. (2008), which consists of 32 items. **Instrument of Self-concept**, Self-concept measurement employs the Tennessee Self Concept Scale (TSCS) by Fitts (1965), with 100 question items, **Instrument of Stress**, The stress variable was measured using the Perceived Stress Scale (PSS) by Cohen et al. (1994), which consisted of 10 question items with a Likert scale, **Instruments of family parenting**, can be measured using 42 items from the Alabama Parenting Questionnaire (APQ) by (Frick, 1991). **Instrument of peers**, The Parent and Peer Influence Scale (Werner-Wilson & Arbel, 2000), is a measuring tool to identify the treatment of parents and peers to adolescents with 17 question items using a 5-point Likert scale. **Instrument of the school environment**, The Student Survey of Maryland's Safe and Supportive Schools Initiative (MDS3) was developed by the Johns Hopkins Center for the Prevention of Youth Violence in collaboration with project partners (Bradshaw et al., 2014). **Violent Behavior**, The dependent variable of the risk of violent behavior in adolescents uses a measuring instrument, Violent Risk Scale: Youth Version (VRS-YV). (Reich, 2000; Fehon et al., 2001)

Data analysis

This study uses distribution, frequency, and proportion tests for the univariate test and the Chi-Square test for the bivariate test. The multivariate test of the hypothesis of the effect of several variables on violent behavior in adolescents was conducted using logistic regression analysis since the data obtained were usually distributed (Valkenburg & Peter, 2011).

3 Results and Discussions

Characteristics of respondents

The results of the respondent characteristic test are presented in table 1 below:

Table 1
Distribution of respondents based on the characteristics of adolescents and families in Gorontalo City in October-December 2021 (n=217)

No	Characteristics of Respondents	Total (n)	Percentage (%)
1	Gender		
	Male	97	44.7
	Female	120	55.3
	Total	217	100
2	Age		
	Early Adolescents	154	71,0
	Middle Adolescents	63	29,0
	Late Adolescents	0	0,0
	Total	217	100

Source: Processed Data, 2021

Bivariate analysis

Predictor variables affecting violent behavior in adolescents

1). Variables of Adolescent Internal Factors

Table 2
Frequency distribution of respondents based on the effect of adolescent internal factors on violent behavior in adolescents in Gorontalo City in October-December 2021 (n=217)

No	Variables	Violent behavior				P-Value	OR
		Commit		Do not commit			
		Total	%	Total	%		
1	Self-control						
	High	110	65,9	57	34,1	0,001	0,345
	Low	20	40	30	60		
2	Self-efficacy						
	High	114	64,0	64	36,0	0,008	0,391
	Low	16	41,0	23	59,0		
3	Stress						
	Stressed	81	52,3	74	47,7		

4	Not stressed	49	79,0	13	21,0	0,001	3,443
	Self-concept						
	Positive	120	65,6	63	34,4		
	Negative	10	29,4	24	70,6	0,001	0,219

Source: Data Processing, 2022

2). Variables of Adolescent External Factors

Table 3
Frequency distribution of respondents based on the effect of external factors on violent behavior in adolescents in Gorontalo City in October-December 2021 (n=217)

No	Variables	Violent Behavior				P-Value	OR
		Commit		Do not commit			
		Total	%	Total	%		
1	Parenting						
	Good	107	67,3	52	32,7	0,001	0,319
	Poor	23	39,7	35	60,3		
2	Peers						
	Good	98	67,6	47	32,4	0,001	0,384
	Poor	32	44,4	40	55,6		
3	School environment						
	Good	124	63,3	72	36,7	0,002	0,232
	Poor	6	28,6	15	71,4		

Sumber: Pengolahan Data, 2021

Multivariate Analysis

Logistics Regression Test

1. Preliminary Modeling

Logistic regression testing is used for multivariate testing of the variables included in the model as described in table 4.8 below:

Table 5
Results of multivariate analysis with logistic regression test of factors related to violent behavior in adolescents in Gorontalo City in October-December 2021 (n=217)

Variables	B	p-Value	OR	CI 95% OR	
Self-control	-0.641	0.092	0.527	0.250	1.109
Self-efficacy	-0.827	0.044	0.437	0.195	0.979
Stress	0.999	0.010	2.716	1.273	5.792
Self-concept	-0.769	0.097	0.464	0.187	1.150
Parenting	-0.843	0.018	0.430	0.214	0.866
Peers	-0.484	0.157	0.616	0.315	1.205
School environment	-1.397	0.014	0.247	0.081	0.758
Constant	6.799	0.000	897.218		

Source: Data Processing, 2022

2. Final Modeling

Table 6

The results of the final modelling of multivariate analysis with logistic regression test of factors related to violent behavior in adolescents in Gorontalo City from October to December 2021 (n=217)

Variables	B	p-Value	OR	CI 95% OR
Self-control	-0.885	0.026	0.413	0.190 0.897
Self-efficacy	-0.935	0.031	0.392	0.168 0.919
Stress	1.313	0.002	3.717	1.651 8.369
Self-concept	-0.662	0.170	0.516	0.200 1.329
Parenting	-0.849	0.021	0.428	0.208 0.880
Peers	-0.327	0.357	0.721	0.360 1.447
School environment	-1.265	0.033	0.282	0.088 0.906
Gender	-1.336	0.001	0.263	0.133 0.521
Constant	8.217	0.001	3704.568	

Source: Data Processing, 2022

Self-control affects violent behavior in adolescents

The analysis shows that self-control affects violent behavior in adolescents. The study found that most adolescents with high self-control did not commit violence (110 or 50.5%). Further analysis of respondents' answers showed the adolescents' ability to control themselves by resisting temptation, reliability to work according to a predetermined schedule, ability to resist bad things, strong discipline, healthy habits, and punctuality. This study is consistent with [Chan & Chui \(2017\)](#), which found a significant overall effect of self-control on juvenile delinquency in China. The results showed that 30 adolescents with low self-control committed violence (60%). Based on further analysis of the questionnaire, these adolescents often bothered their friends, acted without thinking about all the possibilities, did not easily refuse bad things, were undisciplined, and quickly lost their temper.

[Denson et al. \(2012\)](#), state that failure in self-control can contribute to the most aggressive and violent actions. Individuals with low self-control are more likely to engage in criminal and deviant behavior than those with high levels of self-control. A study by [Koordeman et al., \(2015\)](#) on 154 adolescents at the University of Radboud Nijmegen showed that adolescents with low self-control tend to make wrong decisions and engage in risky behavior. In contrast, adolescents with high self-control are less likely to engage in risky behaviors such as alcohol abuse and have a more optimal emotional state.

Self-Efficacy Affects Violent Behavior in Adolescents

The results indicate self-efficacy's positive and significant effect on adolescents' violent behavior. Self-efficacy is the belief in one's ability to regulate and implement specific competencies to overcome barriers and perform certain behaviors ([Sembiring et al., 2022](#)). Someone with high self-efficacy tends to do something with great effort and full of challenges, while individuals with low self-efficacy tend to avoid the given task and give up easily when problems arise. These results are supported by the study of [Haraldstad et al. \(2019\)](#), which revealed that 13% of 723 adolescents were bullied, and most of them with low self-efficacy bullied others. Self-efficacy significantly affects violence in adolescents ([Haraldstad et al., 2019](#)). A study by [Mesuradoet al. \(2018\)](#), on 417 adolescents in Spain found that the role of self-efficacy is related to prosocial events and aggressiveness in adolescents.

The results also reveal that most of the respondents have high self-efficacy. Further analysis showed that respondents knew how to use and manage their emotions, make themselves happy, and use their moods to generate new ideas. In addition, they can calm themselves when angry and creatively solve problems. Respondents can find out the causes of unhappiness and anger by the identifying and understanding self-emotions indicator ([Ernawati et al., 2022](#)). On the indicator of the ability to handle other people's emotions, most respondents identified the causes of other people's happiness, ways to make them happy, and positive input or entertainment for them when they were not happy.

These results are in line with the study by [Lo & Cheng \(2018\)](#) on the effect of self-esteem, self-efficacy, and family contextual factors on violent behavior in two groups of adolescents in Macau. The results found that violence was more common in school-age adolescents and was influenced by low self-esteem and self-efficacy. A study with similar results was conducted by [Kim et al. \(2011\)](#), on the broad interaction between negative health behaviors and psychological attributes in adolescents in South Korea. The study showed that one of the three psychological variables, self-efficacy, was significantly associated with risky behavior on health. Negative health behavior in adolescents may be caused by negative psychological attributes such as low self-esteem and self-efficacy.

Stress affects violent behavior in adolescents

The data analysis using the Chi-Square test obtained a p-value of 0.001, smaller than an alpha value of 0.05, with an OR value of 3.443. Thus, stress is positively and significantly related to violent behavior in adolescents, where adolescents with low-stress levels are 3,443 at risk for violent behavior.

A total of 62 respondents of junior high school students, or 28.6%, were stressed, and 155 respondents, or 71.4%, were not stressed. Of these, 74 respondents (34.1%) with high-stress levels committed violence. Most of them were upset about something that happened unexpectedly and could not control essential things in their life. They were often nervous, stressed, and not confident in handling personal problems. They were also unable to control the sadness of their lives, quickly got angry over something out of control, and often piled up big problems so they could not handle them anymore ([Muslimin et al., 2022](#)).

Self-concept affects violent behavior in adolescents

The data analysis using the Chi-Square test obtained a p-value of 0.001, which is smaller than the alpha value of 0.05, with an OR value of 0.219. Thus, self-concept is positively and significantly related to violent behavior in adolescents, where adolescents with negative self-concepts risk 0.219 times for violent behavior. A positive self-concept encourages an optimistic attitude and strong self-confidence to deal with any situation. On the other hand, a negative self-concept will lead to insecurity and extreme powerlessness, which can trigger aggressive actions against objects around the individual concerned. The number of respondents with a positive self-concept is 183 or 84.3%, while respondents with a negative self-concept are 34 or 15.7%. The study also reported that 120 students with positive self-concept (55.3%) and 24 (11.1%) with negative self-concept committed violence.

A study by [Blakely-McClure & Ostrov \(2016\)](#), revealed a correlation between self-concept and aggressive behavior in adolescents. Individuals who are not comfortable with their abilities or physical appearance will behave aggressively as a way to gain status in their environment. Self-concept plays a significant role in human behavior. Self-concept appears in childhood through interaction with the environment. Self-concept is the perception of individuals concerning themselves concerning the environment and others.

Parenting affects violent behavior in adolescents

Data analysis using the Chi-Square test obtained a p-value of 0.000, which is smaller than the alpha value of 0.05, with an OR value of 0.316. Thus, parenting is positively and significantly related to violent behavior in adolescents, where adolescents with poor parenting have a 0.316 risk of committing violent behavior.

The data also found the application of good parenting in 159 respondents (73.3%) and poor parenting in 58 respondents (26.7%). The respondents stated that when their parents gave threats or fair warnings, they often continued to do what their parents forbade them to do. The parents did not back down and gave up even though the adolescents were angry after getting a 'no' from them. Parents often did not let it go when the adolescents did not do what they asked. When adolescents could not do something, parents did nothing until they did it themselves. If saying 'no' worked, parents would offer something fun to get the adolescents to behave themselves. Parents would not insult, say bad things, or call their names rudely when the adolescents did something they did not like. These results agree with the study of [Cutrin et al. \(2017\)](#), which concludes that parenting has a significant effect on violent behavior in younger adolescents and therefore requires early

intervention as prevention. Several studies have suggested that protective factors are more significant in middle childhood and that risk factors are more common during adolescence (Loeber et al., 2009).

Peers affect violent behavior in adolescents

Data analysis shows that peers affect violent behavior in adolescents. These results align with a study by Lin et al. (2020), on 732 adolescents in China who explained that exposure to violence in the community was a mediating effect of school involvement and deviant peer affiliation. Structural equation modelling proves that violence in the community due to peer affiliation leads to an increase in violent behavior (Lin et al., 2020). The data shows that 145 respondents (66.8%) have good peers, and 72 (33.2%) have deviant peers. Most respondents stated that their beliefs and values about violent behavior were influenced more by parents than by peers. Some respondents also strongly disagreed with alcohol use, fighting, and violence, with these beliefs being influenced more by their parents than by their peers.

These results are supported by a study by Haggerty et al. through logistic regression tests, which revealed that racial and income differences in violent behavior were mediated by association with peers who had severe problems at school. Violent behavior, which was reported to be perpetrated more by blacks than whites, was caused by family income and high levels of deviant association with peers at school (Haggerty et al., 2013). Referring to the data, 145 respondents (66.8%) have good peers, while 72 others (33.2%) have deviant peers. Most respondents stated that parents influenced their beliefs and values about violent behavior more than their peers. Some respondents also strongly disagreed with alcohol use, fighting, and violence, with these beliefs being influenced more by their parents than by their peers.

School environment affects violent behavior in adolescents

Data analysis using the Chi-Square test obtained a p-value of 0.002, smaller than an alpha value of 0.05, with an OR value of 0.230. Thus, the school environment is positively and significantly correlated with violent behavior in adolescents, where adolescents and the school environment are 0.230 times less at risk for violent behavior. A previous study in China supported this result, stating that the prevalence of violent behavior varied according to the type of school. The prevalence of violent behavior in schools in China is around 26.10% for both perpetrators and victims, and the prevalence of witnessing bullying is 28.90%. Elementary school students experience a higher incidence of bullying, and schools are known to have a higher incidence of violence. Indicators of school atmosphere, especially relationships with teachers, classmates, and perceived academic performance are significant protective factors against general disturbances in school (Han et al., 2017).

Referring to the data, 196 respondents (90.3%) have a good school environment, while the other 21 (9.7%) are in a bad one. The results of the further test explained that the respondents felt that the school environment was good because the atmosphere supported learning activities, the teacher paid attention to the needs of students and wanted to help those with problems, and all parties understood the rules that apply in the school. Respondents also revealed that there is mutual respect between students and students and teachers. Thus, most of them feel happy and safe when they are at school.

4 Conclusion

Referring to the data, most of the respondents were females (120 or 53.3%) and 13 years old (146 or 70.0%). The results of the bivariate test showed that all variables were $p < 0.05$. Thus, these variables are internal and external predictors that affect violent behavior in adolescents. Nursing professionals are expected to be able to recognize symptoms and prevent the occurrence of violent behavior in adolescents to reduce its negative impact. Future researchers are expected to explore violent behavior in adolescents further using the latest theories and be able to control other variables that can affect violence in adolescents.

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