

## Non-exposure parenting increases risk of bullying behavior in junior high school students

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### ABSTRACT

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#### BACKGROUND

Bullying behavior is one of many behavioral and disciplinary problems among school students, which has a wide impact on youth, families, schools, and communities. Parenting and the role of parents as good educators (exposure) can prevent mental, emotional and behavioral disorders caused by bullying. The aim of this study was to determine the role of self-esteem and family factors on bullying behavior in junior high schools students.

#### METHODS

A cross-sectional study was conducted including 1324 junior high school students of Penjaringan village, North Jakarta. Respondents filled out questionnaires on demographics (age, gender, economic status, educational level), Rosenberg self-esteem questionnaire, strength and difficulties questionnaire, Olweus bullying questionnaire, Hamilton scale for depression, parenting style, and family adaptability and cohesion scales III. Simple and multivariate logistic regression tests were used to analyze the data.

#### RESULTS

Respondents consisted of 53.5% females and 46.5% males, with an age range of 13-16 years. A total of 45% was involved in bullying (victims, perpetrators, and victims and perpetrators). Gender, self-esteem, family relationships, and parenting were significantly associated with bullying role ( $p < 0.05$ ). Multiple logistic regression analysis showed that self-esteem (odds ratio=23.89; 95% CI:7.899-12.990) and non-exposure parenting (odds ratio=39.11; 95% CI:2.455-8.210) were significantly associated with bullying behavior.

#### CONCLUSIONS

Non-exposure parenting was the most relevant risk factor of bullying behavior. Low self-esteem increases the risk of bullying behavior. These findings suggest the need of timely bullying prevention and intervention programs that should have a special focus on families of primary high school students.

**Keywords:** Bullying behavior, family factors, self-esteem, junior high school students

## INTRODUCTION

Bullying is a phenomenon that is widespread in the whole world. Bullying is a term that sounds foreign to most Indonesians, although this phenomenon has been occurring for a long time and in various aspects of life, including the educational world.<sup>(1)</sup> Bullying is a phenomenon characterized by negative acts towards peers, with the intention to hurt, that is performed repeatedly and is accompanied by physical or verbal aggression, or relational harassment by social manipulation and ugly rumors. During the last decades alarming conditions have been found, where more bullying is performed by adolescents, particularly in schools.<sup>(2)</sup> The considerable number of cases of violence that occur at present among school children is of much concern to educators and parents.<sup>(2,3)</sup> The school that should be a place for the children to acquire knowledge and to help persons in forming a positive character, turns out to be a place for the fertile growth of bullying practices, thus inspiring fear to children and adolescents.<sup>(2,3)</sup>

The prevalence of bullying is estimated to be up to 50% in several countries in Asia, the US and Europe. In the Philippines the prevalence is as large as 21.2% and in Thailand as large as 10.3% in children aged 11-16 years.<sup>(4)</sup> The prevalence of bullying in junior high school students varies between countries, being 11% in the US, 14.7% in Italy and 27% in the UK.<sup>(5,6)</sup> A survey in China states that 20% of adolescents experience bullying behavior, while in Venezuela around 31.5% of adolescents experience bullying behavior.<sup>(4)</sup> The prevalence of bullying in state primary school pupils is 89.5%.<sup>(7)</sup> Accurate data on the prevalence of bullying in junior high school students in Indonesia are lacking.

Bullying is behavior that is deleterious to the development of mental and physical health of children or adolescents. Bullying behavior should not be tolerated, since it has serious physical, psychological, and psychosomatic effects for all concerned, i.e. the perpetrators (bullies), victims, and bully-victims (aggressive victims, persons

who are both victims and bullies), that can persist into adult life. Some of the effects that may occur are difficulties in socializing, self-withdrawal, anxiety, depression, suicidal ideation [thinking about or attempting suicide], eating problems, somatic symptoms (decreased appetite, headaches, sleeping problems, abdominal pain, and easy fatiguability, substance abuse, and other mental disturbances.<sup>(8,9)</sup> Van der Wal et al.<sup>(10)</sup> state that with regard to bullying in schools, particularly those who are involved as victim or bully-victim, may feel excluded, have decreased academic achievement, become drop-outs, and be lacking in self-esteem. The factors affecting the occurrence of bullying behavior, particularly in schools, are internal and external. Internal factors are age, gender, physical condition, psychological condition, and others.<sup>(11)</sup>

The phenomenon of bullying behavior is like an iceberg that is apparently “small” at the surface, but may have many problems in store that are mostly not easy to discover or to be aware of, by teachers or even parents.<sup>(1,2)</sup> The community (especially parents and teachers) are frequently misled by the apparent “insignificance” of bullying behavior, so that they ignore the future impact and extraordinary danger towards both victims and bullies, as well as bully-victims, and the widespread impact towards the community.<sup>(1,3)</sup> There is a need to detect at an early stage the presence of bullying behavior and to know the role of family factors, so as to be able to take early preventive measures against bullying behavior, particularly in schools, and to perform at an early stage interventions on the resulting effects, in their physical as well as mental aspects. Therefore this study aimed to determine the role of family factors and self-esteem in bullying behavior among junior high school students.

## METHODS

### Study design

The design of the study used was cross-sectional and the study was conducted from April – September 2015 at a junior high school in the

kelurahan (village) of Penjaringan, North Jakarta.

### Study subjects

There were 1336 students of state and private junior high schools in Kelurahan Penjaringan, North Jakarta. The study sample was recruited by consecutive sampling. All male and female students of the I, II, and III grades of state and private junior high schools in Kelurahan Penjaringan, North Jakarta, were selected as study subjects.

### Instruments

The instruments used in this study were as follows. First, the demographic questionnaire comprising age, gender, educational level, and economic status of the family. Second, the Rosenberg self-esteem questionnaire comprising 10 questions with 4 categories. Self-esteem is high if the total score is  $\geq 15$ , while self-esteem is low if the total score is  $< 15$ . Third, the strength and difficulties questionnaire (SDQ) comprising 28 questions used to measure behavioral and emotional problems; behavioral problems are positive if the total score is  $\leq 15$  and negative if the total score is  $\geq 16$ . Fourth, the Olweus bullying questionnaire (OBQ) comprising 39 questions and consisting of 2 parts, i.e. a questionnaire about victims of bullying (questions nos. 1-23) and a questionnaire about perpetrators of bullying (questions nos. 24-39); bullying behavior is positive if the respondent selects option c (only 2 or 3 times per month), or d (around once weekly), or e (more than once weekly) and bullying behavior is negative if the respondent selects option a (I did not do that in the last 6 months), or b (once or twice in the last 6 months). Fifth, the Hamilton rating scale for depression (HDRS) comprising 17 questions used to measure depression. The interpretation of the total score is: 0-7= no depression, 8-13= mild depression, 14-18= moderate depression, 19-22= severe depression, and  $\geq 23$ = very severe depression. Next, the questionnaire on parental nurturing pattern (parenting type) consisting of

26 questions in group A and 6 questions in group B. The parenting pattern involves non-exposure if the total score is  $\leq 27$  and exposure if the total score is  $\geq 28$ . Finally, the questionnaire on family relations (family adaptability and cohesion scales III) consisting of 16 questions with their interpretations. There are 4 types of family cohesion and 4 types of family adaptability, which are subsequently summarized into 3 types of family relation, i.e. balanced (high), midrange and extreme (low) family relation.

### Statistical analysis

The data of this study were analyzed using binary logistic regression analysis for an association of bullying behavior with self-esteem, gender, type of family relation, and parenting pattern. Multiple logistic regression analysis was used for finding an association of bullying behavior with self-esteem and parenting pattern.

### Ethical clearance

This study obtained ethical clearance from the Ethics Commission of the Faculty of Medicine, Atma Jaya Catholic University of Indonesia in March 2015.

## RESULTS

There were 12 subjects who were not present during the course of the study, so that they were excluded. The participating subjects comprised 1324 persons, among whom 53.5% females, 46.5% males, with an age range of 13-16 years, while 91.3% subjects had a middle economic status. At junior high schools, the subjects were mostly in grade I (35.9%), grade II (32.8%) and grade III (31.3%). This study also showed that 45.1% of the subjects were involved in bullying behavior, i.e. as victims (18.6%), bullies (13.4%) and bully-victims (13.1%). In contrast, the proportion of subjects who were not involved in bullying behavior was 54.9%. The types of bullying behavior that were encountered were verbal bullying (37.6%), psychological and emotional bullying (29.9%),

Table 1. Distribution of characteristics and bullying behavior of study subjects (n=1324)

<b>Characteristic of respondent</b>	<b>n (%)</b>
Age (years)	
13	455 (33.4)
14	425 (32.1)
15	400 (30.2)
16	44 (3.3)
Gender	
Males	615 (46.5)
Females	709 (53.5)
Family socio-economic status	
Middle (Income ≤ Rp.2.500.000)	1209 (91.3)
Low (Income > Rp.2.500.000)	115 (8.7)
Education	
Grade I junior high school	475 (35.9)
Grade II junior high school	434 (32.8)
Grade III junior high school	415 (31.3)
<b>Bullying behavior</b>	
Bullying role	
Victim	246 (18.6)
Bully	177 (13.4)
Bully-victim	173 (13.1)
Bystander/not involved	728 (54.9)
Type of bullying behavior (victims, bullies, bully-victims, n=596)	
Physical	147 (24.7)
Verbal	224 (37.6)
Psychological and emotional	178 (29.9)
Cyber bullying	47 (7.8)
<b>Victims &amp; Bully-Victims</b>	
Perpetrator of bullying	
Classmate	192 (58.5)
Class senior	105 (32.1)
Class junior	31 (9.4)
Location of bullying behavior	
Classroom	133 (37.2)
Hallway	78 (21.8)
Playgrounds	55 (15.3)
Cafeteria	15 (4.0)
Bathroom	28 (8.1)
On the way home from school	55 (15.3)
Time of bullying behavior	
During study hours	117 (33.4)
At change of academic subject	32 (9.0)
During school recess	152 (43.4)
On way home from school	49 (14.2)
Reporting of bullying behavior	
Friends	79 (24.1)
Older/younger brothers	42 (12.8)
Parents	40 (12.2)
Teachers	21 (6.4)
No reporting	146 (44.5)

physical bullying (24.7%) and cyber bullying (7.8%) (Table 1). The subjects who were involved as victim and bully-victim stated that most of the bullies were classmates (58.5%), bullying behavior occurred more frequently in the classroom (37.2%) and during school recess (43.4%). A total of 24.1% victims and bully-victims reported the occurrence of bullying to their friends, 12.8% reported to their older or younger siblings, 12.2% to their parents and 6.4% to their teachers (Table 1).

The results of simple logistic regression analysis showed that the variables of self-esteem, type of family relation, and parenting pattern were significantly associated with bullying role ( $p < 0.050$ ). Evaluation of the results of the Rosenberg Self-Esteem Questionnaire indicated that 67.9% of subjects with low self-esteem were involved in bullying i.e. 38.3% as victims, 11.1% as bullies and 18.5% as bully-victims. On the other hand, subjects with low self-esteem who were not involved in bullying accounted for 32.1%. Simple logistic regression showed that the proportion of self-esteem was significantly different between subjects who were involved and those who were not involved in bullying (victims  $p = 0.011$ ; bullies  $p = 0.021$ ; bully-victims  $p = 0.012$ ). Depression in subjects who were involved in bullying was higher (54.7%) than in subjects who were not involved in bullying (45.3%). Subjects with depression who were involved in bullying were encountered in the groups of victims (22.5%), bullies (16.3%) and bully-victims (15.9%). Depression was not a risk factor of bullying behavior (victims  $p = 0.664$ ; bullies  $p = 0.583$ ; bully-victims  $p = 0.783$ ) (Table 2).

Evaluation of the total score for the Strength and Difficulties Questionnaire (SDQ) indicated that 47.5% of subjects involved in bullying had emotional and behavioral problems, of which 18.1% as bullies, 17.6% as victims and 12.1% as bully-victims. Simple logistic regression showed that emotion and behavior did not constitute a risk for bullying behavior (victims  $p = 0.293$ ; bullies  $p = 0.272$ ; bully-victims  $p = 0.274$ ).

Table 2. Relationship of psychological and family factors with bullying behavior

Variable	Uninvolved (n=728)	Odds ratio determinants of bullying behavior											
		Victims (n= 246)				Bullies (n= 177)				Bully-Victims (n= 173)			
	n(%)	p	Exp	95%CI	n(%)	p	Exp	95% CI	n(%)	p	Exp	95% CI	
<b>Self-esteem</b>													
High	573(67.2%)	36 (4.2)	0.011*	20.4	81.4-92.7	147(172)	0.021*	16.7	432-368	97(114)	0.012*	18.3	11.9-45.9
Low	155(32.1%)	185 (38.3)				52(11.1)				89(18.5)			
<b>Depression</b>													
Present	109(45.3%)	58 (22.5)	0.664	3.6	71.8-123.3	42(16.3)	0.583	3.6	223-39.8	49(15.9)	0.783	2.4	39.0-78.8
Absent	619(58.3%)	111 (10.4)				172(16.1)				162(15.2)			
<b>Behavioral and emotional problems</b>													
Positive	294(52.2%)	99 (17.6)	0.293	3.7	34.1-56.2	101 (18.1)	0.272	4.8	5.20-23.8	68(12.1)	0.274	3.2	78.1-98.5
Negative	499(60.2%)	97 (11.8)				132(16.1)				99(11.9)			
<b>Type of family relation</b>													
Balanced	262(57.4%)	66(14.6)	0.022*	6.4	37.1-59.1	71(15.7)	0.020*	5.8	42.9-87.5	53(11.3)	0.031*	4.9	22.9-42.8
Midrange	400(62.1%)	97 (15.8)				76(11.8)				66(10.3)			
Extreme	233(58.3%)	71 (17.5)				52(13.1)				44(11.1)			
<b>Parenting pattern</b>													
Exposure	576(69.3%)	83(9.0)	0.020*	36.3	21.2-33.56	97(11.7)	0.011*	27.8	122-22.9	76(9.1)	0.010*	31.6	29.8-76.55
NonExposure	152(30.9%)	103 (20.9)				124(25.3)				113(22.9)			

Note: CI= Confidence Interval to Mean 95%; p\*= Significant association

The majority (56.6%) of study subjects had a midrange type of family relation (adequate cohesion and adaptation), while 41.4% of subjects involved in bullying had an extreme type of family relation (low cohesion and adaptation), with 17.1% victims, 10.8% bullies, and 13.55% bully-victims. Simple logistic regression showed that the proportion of the extreme type of family relation was significantly different between the subjects who were involved and those who were not involved in bullying (victims p=0.022; bullies p=0.020; bully-victims p=0.031). The majority of subjects who were involved in bullying (57.1%) had a non-exposure pattern of parenting (unexpected, inconsistent, permissive, overprotective), while of those who were not involved in bullying, there were more (79.1%) who

had an exposure parenting pattern (expected, democratic). Simple logistic regression showed that the proportion of non-exposure parenting was significantly different between subjects who were involved and those who were not involved in bullying (victims p=0.020; bullies p=0.011; bully-victims p=0.010).

Simple logistic regression found three variables with p<0.25, i.e. self-esteem, family relation, and parenting pattern, that played a role in the occurrence of bullying behavior. These three variables were further analyzed using multiple logistic regression. The results of the latter analysis showed that there were two variables affecting bullying behavior, i.e. self-esteem and parenting pattern. The variable of self-esteem had an odds ratio of 23.89 (95%

Table 3. Factors with a role in the occurrence of bullying behavior

Variable	P	Exp (B)	95%CI for EXP(B)	
			Lower	Upper
Family relation	0.085	1.79	0.925	3.422
Non-exposure parenting	0.000	39.11	2.455	8.210
Self-esteem	0.004	23.89	7.899	12.990

CI:7.899-12.990), signifying that subjects with low self-esteem had a 23.89 times greater probability of being involved in bullying behavior, as compared with subjects with high self-esteem. The variable of parenting pattern had an odds ratio of 39.11 (95% CI: 2.455-8.210), signifying that subjects with the non-exposure type of parenting (permissive, authoritarian, inconsistent) had a 39.11 times greater probability of being involved in bullying behavior, as compared with the exposure type of parenting (democratic).

## DISCUSSION

The prevalence of bullying in this study was found to be 45.1%, with 53.5% females and 41.4% males. Females were more involved as victims of bullying (20.3%), while males were more involved in bullying as perpetrators (23.5%). Bullying behavior is a worldwide health problem and its prevalence is increasing from year to year.<sup>(1)</sup> Flemming et al.<sup>(12)</sup> stated that the prevalence of bullying in Asia, America and Europe was estimated to be 40-80%. The incidence rate of bullying in the present study was essentially similar to that of the study by Flemming. Data from the National Mental Health and Education Center in the US indicate that bullying is a form of violence that generally occurs in the school environment, where 15% of students are the perpetrators of bullying and 30% of students are the victims of bullying.<sup>(13)</sup>

The frequently encountered type of bullying in this study was the verbal type, followed by psychological and emotional, physical, and cyber bullying. The verbal, psychological and emotional types of bullying and cyber bullying were more frequently experienced by female than male subjects. On the other hand, the physical type of bullying was more frequently experienced by male than by female subjects. The most frequently found form of bullying in schools were taunting, gossiping or rumor-spreading, followed by hitting and threatening.<sup>(12,13)</sup> The study of Stein et al.<sup>(14)</sup> showed that the most frequent type of

bullying was the verbal type (taunting, name calling), followed by psychological and emotional bullying (spreading of rumors, social isolation), physical bullying (threatening, hitting), and cyber bullying.

The results of this study found that bullying occurred more frequently in the classroom. This finding is in agreement with the study by Nordhagen et al.<sup>(15)</sup> where the classroom, when the teacher was absent, was most frequently used as the location of bullying behavior. Interactions between students were most frequent in the playgrounds, hallways, and classrooms, so that bullying was frequently experienced by the victims in those locations. Bullying may occur anywhere, particularly in locations with minimal supervision by teachers and school personnel, due to the high teacher-student ratio. This study showed that only around 55.5% of victims and bully-victims reported the bullying episodes that they had experienced to their friends and family members (parents, siblings) and that only 6.4% of both victims and bully-victims reported to their teachers. The unwillingness of the students to report the bullying that they experienced to their teachers may be caused by the lack of confidence of the students in their teachers. Incorrect perception, attitude, and acts of teachers towards bullying behavior may result in the low confidence of students in the educational institution and encourage bullying behavior in schools. Actually the ability of teachers to encourage student confidence and remove the gap between teachers and students constitutes the foundation for fighting bullying in schools.<sup>(15,16)</sup> Low self-esteem was most frequently found among subjects who were involved in bullying (67.9%) compared with those who were not involved in bullying (32.1%). Subjects with low self-esteem who were involved in bullying were most numerous among the victims and bully-victims. The victim of bullying is a weak person without peer group support. The majority of victims had low self-esteem and were taciturn and shy. Our study results agree with those of the study by Spade<sup>(17)</sup> who also used the

Rosenberg Self-Esteem Questionnaire, stating that adolescents who were involved in bullying behavior, both as victims and bully-victims, had a significant correlation with low self-esteem. Spade also stated that adolescents with low self-esteem were at risk both as victims and bully-victims.

In this study the prevalence of depression was most frequently found among victims (22.5%), followed by bullies (16.3%) and bully-victims (15.9%). The incidence rate of depression in this study among subjects who were involved in bullying differed with those of the study of Kaltiala-Heino et al.<sup>(18)</sup> who stated that the prevalence of depression was higher in the bully-victims (44% females and 23% males) than in the victims (26% females and 16% males). Depression may be one of the psychological impacts of bullying behavior or an influential risk factor for the occurrence of bullying behavior. Our study did not perform initial screening for depression as impact or risk factor of bullying behavior. This study also showed that the proportion of emotional and behavioral problems among subjects who were involved in bullying as perpetrators (bullies) was 18.1%, as victims 17.6% and as bully-victims 12.1%. Our study results differed with those of the study by Gini<sup>(19)</sup> who also used the SDQ instrument and found that the proportion of emotional and behavioral problems among subjects involved in bullying as victims was 19.2%, as bullies 14.3%, and as bully-victims 27.1%.

Victims of bullying and bully-victims were at higher risk for experiencing mental- emotional problems than were the perpetrators.<sup>(18)</sup> Victims and bully-victims frequently showed symptoms such as anxiety, depression, always feeling insecure, being extremely cautious, having low self-esteem and tending to have limited social interaction and to be isolated by their peers. Perpetrators of bullying behavior more frequently showed behavioral problems and abnormalities such as aggressive behavior, impulsiveness, lack of empathy, challenging and destructive attitude.<sup>(19,20)</sup>

Around 17.1% of subjects who were involved in bullying had extreme family relations (rigid family relation, low emotional bonding). Victims were most frequently found to have extreme family relations. In families with rigid and poor family relations, lack of communication, lack of emotional bonding (closeness) and lack of harmony between family members, the adolescent members may lack guidance and care in their moral and emotional development, so that they grow up with negative perceptions and views towards themselves and their environment, and are at risk of mental emotional problems (depression, anxiety, bipolarity) and behavioral problems (conduct disorder, bullying).<sup>(21)</sup> The non-exposure type of parenting pattern (unexpected, inconsistent, overprotective or overindulgent) were more frequently found in subjects who were involved in bullying (57.1%). Achenbach and Edelbrock<sup>(22)</sup> stated that overindulgent, too rigid and harsh (authoritarian) or inconsistent parenting in disciplining, influenced the personality formation of adolescents, who will be at high risk of mental-emotional problems (depression, anxiety, bipolarity) and behavioral problems (conduct disorder, bullying).

Our study showed that the non-exposure type of parenting pattern constituted the strongest risk factor for bullying behavior among adolescents. This is in accordance with the study of Bacikova-Sleskova et al.<sup>(23)</sup> who found a significant association between parenting pattern and bullying behavior. Their study also stated that the role of parents was essential to instill good behavior and emotions in their adolescent children. Permissive and inconsistent (non-exposure) parenting is the nurturing pattern of parents who give too much freedom to their adolescent children without adequate supervision and tends to form adolescents who are aggressive, impulsive, and egoistic. In contrast, children with authoritarian parenting may acquire a too rigid character, become headstrong and easily anxious and depressed. Parenting pattern and the role of parents as good

educators (exposure, democratic) can prevent the occurrence of behavioral and emotional problems, mental-emotional disorders and bullying behavior. Parents are expected to be capable of giving basic counseling and guidance about morals and religion, and build effective communication with their adolescent children.<sup>(22,23)</sup>

Self-esteem is a risk factor of bullying behavior. Adolescents with low self-esteem tended to be 23.89 times more involved in bullying as compared with adolescents with high self-esteem. Tritt and Duncan<sup>(24)</sup> stated that adolescents with low self-esteem tended to be 18.90 times more involved in bullying than those with high self-esteem. Adolescents with low self-esteem were at risk for the occurrence of mental-emotional health problems, substance abuse and addiction, and bullying behavior. Salmon<sup>(25)</sup> stated that students who had been involved in bullying, either as bullies, victims or bully-victims, had a significant correlation with low self-esteem; the worst bullying behavior was associated with the lowest self-esteem.

A limitation of this study lies in its cross-sectional design, so that it cannot explain any causal relationship among junior high school students between parenting pattern and self-esteem on the one hand and bullying behavior on the other. Further studies should be conducted using a longitudinal study design, to be able to explain any such causal relationship. This study was carried out among junior high school students, so that our study results are not representative of bullying behavior in adolescents outside the school environment. These study results are expected to lead to comprehensive management of adolescents who are involved in bullying behavior at school, i.e. both the physical and psychological aspects, by involving the family (particularly the parents) and school teachers.

## CONCLUSIONS

Non-exposure parenting is the largest risk factor of bullying behavior. Low self-esteem

increases the risk of mental-emotional disturbances (depression, anxiety), conduct disorder, and bullying behavior.

## CONFLICT OF INTEREST

There are no conflicts of interest.

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