Adolescent characteristics and parenting style as the determinant factors of bullying in Indonesia: a cross-sectional study

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Abstract:
Background: The incidence of adolescents bullying in Indonesia has increased. The purpose of this study was to analyze the correlation of demographic characteristics, parental interactions and parenting style as the potential determinants of bullying behavior in adolescents.
Method: The research design used was cross-sectional. The study population consisted of adolescents in Indonesia who accessed the Google form, and adolescents who study at a junior high school and a vocational high school in Surabaya. The study sample totaled 705 adolescents based on consecutive sampling with a study period of 3 months. The independent variables were demographic characteristics, parental interactions and parenting style, while the dependent variable was bullying behavior. The data collection method used was a questionnaire filled in by the adolescents through a Google form and a questionnaire sheet. The statistical analysis used the chi-square test for the adolescent’s characteristics and Spearman’s rank correlation with α = 0.05.
Results: The results showed that the characteristics of the adolescents, namely age and place of residence, were related to bullying behavior. A permissive and authoritarian parenting style had a positive correlation with being a bullying perpetrator, while only permissive parenting style had a positive correlation with being a bullying victim.
Conclusion: Adolescents experience bullying behavior as both the perpetrators and victims. Adolescents living in rural areas are more likely to commit bullying as the perpetrators. A parenting style that is either too rigid or too free has a high risk of being a bullying behavior factor as the perpetrator. Parents are expected to apply an authoritative parenting style in order to prevent the risk of bullying in adolescents.

Keywords: adolescent, bullying, interaction, parenting style

Introduction
Bullying is an aggressive behavior that is intentionally carried out repeatedly on others with the aim of causing injury or discomfort to other individuals. Bullying behavior has been long known as a serious matter related to friendship and it has an impact on the psychosocial, academic, emotional and mental health of both the perpetrators and victims [1]. Bullying is usually defined as a subset of aggressive behavior characterized by repetition (a victim is targeted a number of times) and by an imbalance of power (the victim cannot defend him/herself easily, for one or more reasons) [2]. Bullying behavior can consist of physical, verbal and social bullying [3]. Based on the results of a study conducted in Izmir, Turkey, it showed that children who are the victims of bullying can experience a variety of health problems, namely dizziness, feelings of discomfort, frequent crying, nervousness and sleep disorders [4]. Bullying often occurs as name calling, insulting, mocking, teasing and ostracizing a person [5]. Bullying in schools is a repetitive hostile behavior by individuals or groups used to gain power, honor or goods [6].

Bullying behavior can make others distressed [7]. Bullying has an impact on children around the world [8]. The results of a research study conducted in Iceland showed that 5.5% of school children have been the victim of school bullying 2–3 times each month [9]. A comparison of the results from reports by the Massachusetts
Department of Public Health and the Centers for Disease Control (CDC) showed that 9.9% of male adolescents are bullying actors and that 29.8% of adolescent girls are more vulnerable to being the victims of bullying. The bullying incidence rate among adolescents in schools ranks as the highest public complaint according to the Indonesian Child Protection Commission (KPAI). The Child Protection Commission noted that there were 369 complaints related to bullying from January 2011 to August 2014. This number is around 25% of the total complaints in the education sector, which was many as 1480 cases. The highest rate of bullying in the three biggest cities in Indonesia included Yogyakarta, Surabaya and Jakarta, which showed that the occurrence of bullying violence in high schools was as much as 67.9% and in junior high schools, it was as much as 66.1% [10].

Some of the factors that cause bullying in Indonesia include individual factors, family factors, their peers, the school environment, mass media and the community environment [11], [12], [13]. The results of a study in Spain showed that non-democratic parenting could have an impact on the increased risk of bullying in school children in relation to the manner of punishment for actions related to discipline [14]. The choice of parenting must be adjusted according to the characteristics of the child. There is no correct pattern and there is no wrong parenting. However, the determination of parenting must be based on the level of understanding of the parents about the characteristics and traits possessed by their children. Inappropriate parenting allows for bullying in adolescents. This is evidenced by the research conducted by [15] about the relationship between parenting mothers and bullying behavior in adolescents. Parent interactions that are lacking for the children will have an impact on the emergence of negative behaviors, such as risky behavior. The development of good emotional intelligence in adolescents can be formed because of good interactions between the parents and the adolescents [16]. The purpose of the interaction carried out between the parents and adolescents is in order to build compatibility between the characteristics and abilities of the adolescents in adapting to their environment [17]. A lack of parent interaction with their children will have an impact on the emergence of negative behavior in the children, such as risky behavior. Risky behavior has various aspects, including aggressive behavior [18].

Parents must build up a pattern of good interactions with their children in order to find out the characteristics that their children have. Children who can communicate their life freely to their parents will be able to establish satisfaction in their children and create valuable feelings, so then their children can avoid presenting with inappropriate behavior [18]. The characteristics of adolescents which included gender, place of residence and class level had a correlation with adolescents as the victims of bullying [19]. The results of the study stated that 58.3% of male students had been bullied and that 67.8% of female students had experienced bullying. The highest incidence rate was in the students in grades 8–12 and in the students living in rural areas for experiencing bullying compared to urban students. However, studies that explain the characteristics of the adolescents, the parenting style and the parents ’ interactions with bullying events in relation to the adolescents do not yet exist. The purpose of this study was to explain the relationship between parenting and parental interactions with bullying behavior.

Material and methods

Design

The design of this study was correlational using a cross-sectional approach intending to determine the relationship between the independent variables and the dependent variable. The sampling method applied was consecutive sampling. The independent variables in this study were adolescent characteristics, parenting style and parental interactions. The dependent variable in this study was bullying behavior.

Setting

The population in this study consisted of adolescents who attended a junior high school in Surabaya and a vocational high school in Surabaya and adolescents in other areas of Indonesia. The sample size in this study totaled 705 adolescents in Surabaya, Indonesia. Surabaya is the capital of the East Java province and is one of the major cities in Indonesia. The study was conducted over a period of 3 months, namely from May to July 2018.
Participants

The inclusion criteria in this study consisted of (1) adolescents aged 13–18 years old studying in junior high or senior high school and (2) adolescents who were willing to become respondents. The subject recruitment process consisted of three stages. The first stage was to address the subject of the study to the adolescents in the vocational high schools, where the majority of the students were male. Based on the results of the initial survey focused on 10 students, it showed that nine out of 10 students had become either the perpetrators or victims of most types of bullying. There were also cases of physical bullying between the students. The second stage of the subject used junior high school Students in Surabaya to represent the early teenage period of adolescence. In the first and second stages of the study, the researchers made a direct visit to the schools. In the third stage, the researcher walked the adolescents from the middle school and junior high school in Indonesia through filling in the Google form. The researcher promoted the Google form through social media and through their friends who worked as teachers in high schools and junior high schools, respectively. The sample size was determined through a formula based on the G power analysis.

Variables

The independent variables in this study were the individual characteristics of the adolescents, parenting style and parental interactions, while the dependent variable in this study was bullying behavior in adolescents.

Measurements

Parenting style questionnaire

The questionnaire used to assess the parenting style was the Parenting Style Dimension Questionnaire (PSDQ). The questionnaire detailed three types of parenting, namely democratic, authoritarian and permissive. The PSDQ questionnaire was an adaptation of the Parent Participation Questionnaire (PPQ) by [20]. The PSDQ questionnaire consisted of 32 questions divided into three types, namely authoritative with 15 questions, authoritarian with 12 questions and permissive with five questions. The PSDQ instrument was used with permission from the owner of the instrument. The PSDQ questionnaire was translated into Bahasa Indonesian and it was filled in by the adolescents in order to assess the parenting style of their parents. The reliability of PSDQ had a Cronbach’s $\alpha$ score = 0.757, indicating good reliability.

Parent’s interaction questionnaire

The instrument used for assessing the interactions between the parents and adolescents was the the Parent-Child Interaction Questionnaire-Revised (PACHIQ-R) questionnaire made by [21] and it was filled in by the adolescents. The PACHIQ-R questionnaire was translated into Indonesian and was tested for validity and reliability. All items of the questionnaire had a good validity scores and the reliability testing had a Cronbach’s $\alpha$ score = 0.756. The questionnaire was divided into two measurements, namely the measurement of the interactions of the parent and the measurement of the interactions of the adolescent. The adolescent version had 25 questions. The two subscales were conflict resolution (certain behaviors) and acceptance (certain feelings). There were both positive and negative questions in the PACHIQ-R questionnaire; (6, 8, 9, 11, 14, 16, 17, 18, 19, 20, 21, 23, 24 and 25) and (1, 2, 3, 4, 5, 7, 10, 12, 13, 15 and 22), respectively. The PACHIQ-R had five response categories; “never”, “hardly ever”, “sometimes”, “almost always” and “always”. The score was calculated for each subscale.

Bullying questionnaire

The bullying behavior was measured using the Adolescent Peer Relations Instrument questionnaire developed by [3]. The questionnaire consisted of two sections, namely section A to measure behavior as the bullying perpetrator, while section B was designed to measure the behavior of the victims of bullying. Each section consisted of 18 questions. Bullying behavior consisted of three subscales, namely verbal, physical and social bullying. Adolescents in the school filled in questionnaires directly in the form of the Adolescent Peer Relations Instrument questionnaire, while the adolescents from various regions in Indonesia filled out the questionnaires through the use of a Google form. The minimum value of each section was 18, which meant that the respondent had never bullied another student or that they had never been the victim of bullying. A higher score obtained means that there was an increased amount of bullying behavior experienced by the adolescents. The researchers obtained...
permission to use the Adolescent Peer Relations Instrument questionnaire [3]. The reliability of the Adolescent Peer Relations Instrument questionnaire developed had a Cronbach’s $\alpha$ score = 0.749, which indicated good reliability.

Procedures

The first step was making an online survey through Google forms. The researcher compiled the Google form as a medium for the data collection. The Google form was structured to make it easier for the adolescent respondents to access and understand. After that, the Google form was formed and launched. The process of respondent recruitment was through announcements on social media and through direct information delivery to adolescents in high school and junior high school in various cities in Indonesia. The researcher approached their friends, colleagues and family who were teachers in various junior and senior high schools to ask them to disseminate the study information to their students. The contents of Google form contained the explanation of the study purpose, the benefits and risks, the principles of confidentiality, the fact that it was voluntary and any compensation for the adolescents before they completed the questionnaire through the Google form. Adolescents can agree to participate in research through their informed assent. Every respondent who filled in the online questionnaire through the Google form was given credit of 20,000 rupiahs as compensation. The data obtained through the Google form was tabulated and edited. To ensure that there was no double data, the researcher screened the double data identified from the mobile number. If double data was detected, it was excluded from the data tabulation. Indonesia has a policy that every cellular card user must register a mobile number centrally. So that it can minimize the use of multi numbers in the Indonesian population. The next data collection was specifically for the adolescents in the Surabaya area. The places of research were a vocational high school and junior high school in Surabaya. The researcher asked for permission from the principal to carry out the research. The researcher came to the school the day before the students were due to fill in the questionnaire. The researcher gave an explanation to the adolescents about the goals, the benefits and risks, the principles of confidentiality, the fact that it was voluntary, compensation and the involvement of the adolescents in the study itself. After that, the researchers distributed approval sheets to the adolescents for them to give to their parents. An explanation of the study was also given to their parents along with the informed consent sheet. The informed consent was signed by the parents. The next step was to distribute the questionnaires to the students of both the vocational and junior high school, as it was self-administered.

Analysis

The results of the data obtained were then used to carry out descriptive and inferential analysis. The descriptive data analysis was about the percentage or frequency distribution, mean and standard deviation. The inferential analysis used chi-square analysis and Spearman’s rank correlation with $\alpha = 0.05$.

Ethical clearance

This research received an ethical clearance certificate from the Health Research Ethics Commission 906-KEPK and 934-KEPK.

Results

More than half (53.9%) of the adolescents in the vocational high school were male, with a large percentage of 79.4%. More than half (67%) of the adolescents living in an urban area were middle adolescents at 58.3%. Authoritarian was the most widely applied parenting style according to the perception of the adolescents (49.9%). Permissive was the least applied parenting style, according to the adolescents (12.2%). Most adolescents were either bullying perpetrators or victims. The number of adolescents who did not become perpetrators and who were not a victim of bullying was very small, at 4.5% out of the total 705 adolescents (Table 1).

Table 1: Demography characteristics.

<table>
<thead>
<tr>
<th>No.</th>
<th>Demography (n = 705)</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Sex
   Male 380 53.9
   Female 325 46.1

2. Level of education
   Junior high school 145 20.6
   Senior high school 560 79.4

3. Residences
   Rural 233 33
   Urban 472 67

4. Ages
   Early adolescent (11−14 years old) 113 16
   Middle adolescent (15−17 years old) 411 58.3
   Late adolescent (18−20 years old) 181 25.7

5. Parenting style
   Authoritative 268 38.01
   Authoritarian 351 49.78
   Permissive 86 12.21

6. Bullying behavior
   Perpetrators 55 7.8
   Victims 73 10.4
   Perpetrators and victims 545 77.3
   Not a perpetrator and not a victim 32 4.5

Gender was not related to bullying behavior in adolescents (p = 0.887). Male and female adolescents have the same tendency to carry out bullying behavior. The adolescent period itself is related to bullying behavior (p = 0.004). Middle adolescents have the opportunity to become either bullying perpetrators or victims. The level of adolescent education was not related to bullying behavior (p = 0.056). Adolescents who were in junior and senior high school had the same opportunity to become either bullying perpetrators or bullying victims. The adolescents’ residential area was related to bullying behavior (p = 0.000). Most of the adolescents who lived in rural areas become either perpetrators or bully victims (Table 2).

Table 2: Demographic correlation of respondents with bullying behavior in adolescents.

<table>
<thead>
<tr>
<th>No.</th>
<th>Demographic</th>
<th>n = 705</th>
<th>Perpetrators</th>
<th>Victims</th>
<th>No perpetrators and no victims</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sex</td>
<td></td>
<td>Perpetrators</td>
<td>Victims</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td></td>
<td>28 (7.4)</td>
<td>37 (9.7)</td>
<td>298 (80.4) 17 (4.5)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td></td>
<td>27 (8.3)</td>
<td>36 (11.1)</td>
<td>247 (61)  15 (4.6)</td>
</tr>
<tr>
<td>2.</td>
<td>Age</td>
<td></td>
<td>Perpetrators</td>
<td>Victims</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Early adolescent</td>
<td></td>
<td>15 (13.3)</td>
<td>14 (12.4)</td>
<td>74 (65.5) 10 (8.8)</td>
</tr>
<tr>
<td></td>
<td>Middle adolescent</td>
<td></td>
<td>24 (5.8)</td>
<td>36 (8.8)</td>
<td>338 (82.2) 13 (3.2)</td>
</tr>
<tr>
<td></td>
<td>Late adolescent</td>
<td></td>
<td>16 (8.8)</td>
<td>23 (12.7)</td>
<td>133 (73.5) 9 (5)</td>
</tr>
<tr>
<td>3.</td>
<td>Level of education</td>
<td></td>
<td>Perpetrators</td>
<td>Victims</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Junior high school</td>
<td></td>
<td>17 (11.7)</td>
<td>17 (11.7)</td>
<td>101 (69.7) 10 (6.9)</td>
</tr>
<tr>
<td></td>
<td>Senior high school</td>
<td></td>
<td>38 (6.8)</td>
<td>56 (10)</td>
<td>444 (79.3) 22 (3.9)</td>
</tr>
<tr>
<td>4.</td>
<td>Residences</td>
<td></td>
<td>Perpetrators</td>
<td>Victims</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rural area</td>
<td></td>
<td>3 (1.3)</td>
<td>15 (6.4)</td>
<td>212 (91)  3 (1.3)</td>
</tr>
<tr>
<td></td>
<td>Urban area</td>
<td></td>
<td>52 (11)</td>
<td>58 (12.3)</td>
<td>333 (70.6) 29 (6.1)</td>
</tr>
</tbody>
</table>

*Significance at the level p ≤ 0.05.

The bullying behavior in adolescents was in the range of never being a perpetrator and never having been a victim of bullying. The maximum score for being a bullying perpetrator was 90, which means that there was an adolescent who was a bullying perpetrator several times in a period of a week. The maximum score for the
victims of bullying was 100. This means that there were adolescents who experienced being a victim of bullying several times a week, which was almost every day (Table 3).

### Table 3: Relationship of parent interaction and parenting style with bullying behavior in adolescents.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Min–Max</th>
<th>Mean</th>
<th>SD</th>
<th>p-Value</th>
<th>r</th>
<th>Bullying perpetrators</th>
<th>Bullying victims</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conflict resolution</td>
<td>22–85</td>
<td>58.3</td>
<td>12.1</td>
<td>0.108</td>
<td>-0.061</td>
<td>0.462</td>
<td>-0.028</td>
</tr>
<tr>
<td>Acceptance</td>
<td>8–40</td>
<td>22.8</td>
<td>8.2</td>
<td>0.102</td>
<td>-0.062</td>
<td>0.819</td>
<td>0.009</td>
</tr>
<tr>
<td>Parenting style</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authoritative</td>
<td>1–5</td>
<td>3.2</td>
<td>0.69</td>
<td>0.503</td>
<td>-0.025</td>
<td>0.569</td>
<td>-0.021</td>
</tr>
<tr>
<td>Authoritarian</td>
<td>1–4.7</td>
<td>2.9</td>
<td>0.68</td>
<td>0.000</td>
<td>0.131</td>
<td>0.164</td>
<td>0.053</td>
</tr>
<tr>
<td>Permissive</td>
<td>1–5</td>
<td>2.4</td>
<td>0.77</td>
<td>0.001</td>
<td>0.129</td>
<td>0.026</td>
<td>0.084</td>
</tr>
<tr>
<td>Bullying behaviors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bullying perpetrators</td>
<td>18–91</td>
<td>26.8</td>
<td>10.1</td>
<td></td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bullying victims</td>
<td>18–100</td>
<td>29.4</td>
<td>12.7</td>
<td></td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SD, standard deviation.

Parental interaction consists of two subscales; conflict resolution (certain behaviors) and acceptance (certain feelings). The two subscales in parental interaction were not related to bullying behavior in adolescents. Authoritarian and permissive parenting style had a very weak positive with being a bullying perpetrator. The more authoritarian and permissive the parenting style, the higher the risk for the adolescents to become bullying perpetrators. Permissive parenting style also had a very weak positive correlation with being a bullying victim. Authoritative parenting style had no correlation with bullying behavior. This means that the authoritative parenting style did not lead the adolescents to engage in bullying behavior, either as perpetrators or as victims (Table 3).

### Discussion

Adolescence is a period of rapid physical, cognitive, emotional and social maturity in both males and females [22]. The difference in the growth and development that occurs in adolescents is influenced by gender, age and place of residence. The growth rate of adolescent girls starts at the age of 12 years old and ends at the age of 16 while in adolescent boys, it starts from the age of 14 years and goes through up to 18 years. Male and female adolescents have the same opportunity to carry out bullying behavior, either as perpetrators or as victims. Male adolescents manifest more types of physical bullying [23]. The results of this study also showed that male and female adolescents had almost the same percentage of being either bullying perpetrators or victims. Understanding bullying behavior according to the gender differences is very important in order to arrange the prevention and management of bullying behavior in schools [24].

The developments that occur in adolescents are also influenced by age, where in the late adolescents, the individuals will be more mature emotionally compared to younger adolescents. The tabulation data for the distribution of adolescents showed that adolescents ranging in age from 15 to 17 years or who were included the category of mid-dominant adolescents were victims, making up more than half of the total number of respondents in the study. Adolescence is a period where the individual is in the midst of changes, such as complaining if their parents are meddling in their lives, being very concerned about their appearance, trying to make new friends, not appreciating the opinions of their parents, being moody, being very concerned about being accepted in groups that are selective and competitive, and starting to experience periods of time separated from their parents. The results of this study are also in accordance with the research carried out by [19]. In the middle of the adolescent life period, there is a learning process related to emotional maturity through interactions with the environment, but not all adolescents can achieve emotional maturity easily. This can lead to aggressive behavior in adolescents, one of which is bullying behavior. Individuals can be said to have reached emotional maturity in mid and late adolescence, as they do not to blow up their emotions in front of others, but instead wait for a more appropriate time and place to express their emotions in ways that are more acceptable [25].

The environment also affects the development and growth that occurs in adolescents [26]. In the distribution for the area of residence related to bullying behavior, the results for the majority of adolescents were focused on
Adolescents have the tendency to become bullying perpetrators and at the same time, to also become the victims of bullying behavior. Middle adolescents are the dominant age for this pattern of bullying behavior, both as the perpetrators and as victims. Adolescents who live in rural area have a tendency to manifest this pattern of bullying behavior. The authoritarian parenting style applied by parents relates to bullying behaviors in adolescents. The results of this study are consistent with the research conducted by [31], which states that children who were categorized as conducting authoritarian parenting, which means that the parents scold their children when they do not comply with the rules. Physical punishment and strict discipline practices from the parents will have a negative impact, one of which is the emergence of aggressive behavior in the children [14]. Cruel parents can increase the susceptibility of the adolescents to conduct bullying behavior in school or otherwise violent behavior with their peers [34].

The authoritarian style of parenting can cause the parents to intentionally or unintentionally make their children become accustomed to the bullying behavior that occurs in their environment [35]. Children who are accustomed to physical punishment and aggressive behavior will tend to be bullying perpetrators [36]. Parents who apply the authoritarian parenting style to their children often respond with physical and verbal punishments if they make mistakes. The verbal punishment given by the parents can take on the form of harsh words and insults. Children who experience bullying at home such as humiliation and shouting can result in them becoming more anxious, less confident and feeling inferior, which can increase the risk of the children becoming the victims of bullying [34]. Victims of bullying have individual characteristics such as finding it difficult to get along with others, having a lack of communication skills and having low self-esteem [16]. If it is related to the treatment of parents, the characteristics that exist in the victims of bullying are caused by an authoritarian parenting style when it is applied continuously by the parents [37]. Children who have authoritarian parents can become either the perpetrators or victims of bullying [38]. According to the results of the research, it was found that the parenting style that was not related to bullying behavior was authoritative. Authoritative parenting is fairer and strives to meet the needs of the children [39].

Conclusion

Adolescents have the tendency to become bullying perpetrators and at the same time, to also become the victims of bullying behavior. Middle adolescents are the dominant age for this pattern of bullying behavior, both as the perpetrators and as victims. Adolescents who live in rural area have a tendency to manifest this pattern of bullying behavior. The authoritarian parenting style applied by parents relates to bullying behaviors in adolescents. Parenting that is too rigid (authoritarian) or that is too free (permissive) has a high risk of causing a bullying behavior factor both as a perpetrator and as a victim. Parents are expected to apply an authoritative parenting style in order to prevent the risk of bullying in adolescents. Authoritative parenting is fairer and strives to meet the needs of the children.
Study limitations

The one method of data collection used in this study was to use a Google form so that the researchers did not meet directly with the respondents. There was a personal contact phone number for the researcher so could have been contacted by the respondent if there was information that was not understood.

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References


