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## Anxiety and Aggressive Behavior in Adolescents: A Correlational Study

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### Abstract

**Background:** Aggressive behavior has become a severe behavioral problem in adolescents recently. Some cases have even been deemed an emergency for mental health behavior in adolescents. Many factors are suspected to be associated with aggressive behavior, including anxiety. Anxiety and aggressive behavior remain widely studied in children, but studies among middle and late adolescents is limited. . In addition, there is no clear description of the psychosocial aspects between anxiety and aggressive behavior in adolescents based on the psychosocial development tasks.

**Objective:** The study aims to identify the association between adolescents' anxiety and aggressive behavior.

**Methods:** This cross-sectional study was in senior high schools in Surakarta in July 2021. Subjects were taken using convenience sampling, in which 626 students filled out the online questionnaire, while 32 students did not complete some items resulting in a total sample of 594 respondents. Then, the research instruments employed DASS 21 for anxiety and Buss Perry Questionnaire for aggressive behavior. The statistical analysis then utilized the Pearson product-moment test.

**Results:** The research found 44.8% had a bullying victim history and as 13.% as a violence victim, and parental divorce history (10.3%). The statistical test also uncovered a significant correlation between anxiety and aggressive behavior ( $p$ -value 0.0001,  $r$ : 0.649, OR:7.86, CI 95%).

**Conclusion:** The finding demonstrates the association between adolescents' anxiety and aggressive behavior. Consequently, the community mental health nurses should organize a partnership mental health program with the senior high schools to manage adolescent anxiety and aggressive behavior.

**Keywords:** Adolescent; Anxiety; Aggressive Behavior

## INTRODUCTION

Aggressive behavior becomes a severe behavioral issue in adolescents as some cases are referred to an emergency room (Guedj-Bourdiau et al., 2021). This behavior can manifest in actions ruining objects or striking other people intentionally and consciously. Injury, harmful conditions, strained interpersonal relationships, fear, isolation, and psychological development disturbance are some of the adverse impacts of aggression (Shao et al., 2014).

The survey on aggressive behavior exposed a high score of aggressive cases in adolescents. WHO survey reported that 161,082 students were involved in school brawls (Liu et al., 2013). In Indonesia, the total aggressive behavior was 952,397 in 2017 and increased further in 2022. The previous study also disclosed that most teenagers aged fourteen to twenty had moderate aggressiveness (Afdal et al., 2020).

Additionally, aggressive behavior describes maladaptive reactions correlated with social, environmental, and individual factors (Guedj-Bourdiau et al., 2021). In this case, many factors are suspected to be associated with aggressiveness, one of which is anxiety. Anxiety is indicated by disruption of mood, cognitive perception, behavior, and some physiological activities (Adwas et al., 2019). Anxiety is also a worry condition because of unsavory conditions (Videbeck, 2020).

Previous studies have shown a correlation between anxiety and aggressive behavior in children in elementary students. For example, in a study, a higher risk of anxiety was correlated with aggressive behavior (Chung et al., 2019). Another study revealed that in adult age, there was an interaction between anxiety and aggression (Wehde, 2020). However, there were some limitations regarding the number of research concerning this topic in middle and late adolescents. Furthermore, there is no clear description of the psychosocial aspects between anxiety and aggressive behavior in adolescents based on the psychosocial development tasks. Therefore, using a more appropriate concept of the relationship between adolescents' anxiety and aggressive behavior is essential, especially with differences in measurements and research design.

By using correlational studies with appropriate instruments, such as DASS 21 and Buss Perry Questionnaire, this current study describes in more detail the correlation between anxiety and aggressive behavior in psychosocial aspects.

Based on the preliminary study data obtained from interviews with counseling teachers, it was unveiled that some aggressive students also experienced anxiety, but some others did not undergo anxiety. For this reason, the research aims to analyze the association between adolescents' anxiety and aggressive behavior.

## METHOD

### Research design

The research used an analytical correlation design with a cross-sectional approach.

### Setting and samples

The study was conducted in two senior high schools, one in a public school and one in a private school. The time of the study was in July 2021. The samples were taken using convenience sampling. Subjects were 626 senior high school students in the 12th grade who filled out the online questionnaire, while 32 students did not complete some items resulting in a total sample of 594 respondents. The inclusion criteria consisted of senior high school students in Surakarta, while the exclusion criteria were students with a mental disorder. In this case, students diagnosed with mental disorders were excluded through an online questionnaire filled out by students and confirmed by the counseling teacher.

### Measurement and data collection

The research was carried out with an online survey. The respondents were asked about their gender, bullying victim history, violence victim history, and parental divorce history. Then, the measurement instruments of anxiety employed DASS 21, while the measurement of aggressive behavior utilized the Buss & Perry Questionnaire. Since the DASS 21 is appropriate for measuring depression, anxiety, and stress, the study used it to measure adolescents' anxiety; it has also been tested in many previous

studies on adolescents' anxiety in Indonesia (Pertiwi et al., 2021; Wardani I.Y., Afifah, 2022). Moreover, DASS 21 has been valid and reliably tested, with Cronbach's alpha score of 0.81 for depression, 0.89 for anxiety, and 0.78 for stress (Szabó, 2010). Meanwhile, the Buss & Perry Questionnaire has been valid and reliably assessed, with 23 valid questions and a Cronbach Alpha value of 0.864, where Cronbach's alpha of 0.6 means reliable (Abd Ghani & Che Rozubi, 2020). The Buss and Perry Questionnaire has also been used in previous studies in Indonesia to measure aggressive behavior in adolescents (Hardoni et al., 2019; Noviadi et al., 2018).

### Data analysis

Microsoft excel and SPSS version 23 (IBM Statistical Package for Social Sciences) were used to analyse the data. The univariate analysis was served in a frequency distribution, while the bivariate analysis was in tendency central. Then, the statistical analysis used the Pearson product-moment test.

### Ethical considerations

Informed consent was given to the respondents virtually. Adolescents could decide carefully without parental consent regarding their participation in the research. Using adolescent self-consent without parental consent is allowed with the following conditions, such as 1) the minimum age of the respondents is 14 years old (Weir, 2019) or 16 years old, 2) the study generally has no risk, and 3) middle adolescence age are capable of making a decision and logic thinking (Strode & Essack, 2022). Further, the research has received ethical clearance from the Ethics Committee of UKH Surakarta with number 034/UKH.L.02/EC/IX/2020.

### RESULTS

Most respondents were female (67.8%). In addition, adolescents had some aggressive risk factors, such as bullying victim history (44.8%), violence victim history (13.3%), and parental divorce history (10.3%). The results are described in Table 1.

The students experienced anxiety with a mean score of 11.81 (anxiety with moderate level); SD 7.12; aggressive behavior with a mean score of 78.79 (aggressive behavior with moderate level); SD 14.68. Besides, there was an association between

anxiety and aggressive behavior with a positive and robust correlation (p-value 0.0001, CI 95%, r: 0.649, OR: 7.86). The results are presented in Table 2.

## DISCUSSION

### Characteristics of adolescent

The research indicates that the total of female students was dominant in the school. In this regard, females show more delicate psychological and EEG responses to threats than males. Meanwhile, the previous study reported no significant differences between females and males in indirect aggressive behavior (Im et al., 2018). However, it is contrary to another study's result that female is more aggressive indirectly or verbally than male, while male is more aggressive physically (Alizamar et al., 2018). In addition, high levels of aggression are experienced more in females than males (Nahida Shaban & Dr. Pardeep Kumar, 2016).

Moreover, this study denotes that 44.8% of respondents were bullying victims. Related to that, adolescents with a bullying victim history have a high risk of aggressive behavior. Bullying victimization triggers the person to have personality disturbance (Huseynova & Enikolopov, 2014). The adolescent who had also been bullied had an elevated risk of having emotion dysregulation and tended to be antisocial and uncooperative. Besides, the bullied person perceived that some negative behaviors affected bullying as their self-protection (Guedj-Bourdiau et al., 2021).

Further, 13.3 % of respondents had a violence victim history. Another study showed evidence that a woman with psychological abuse has a higher risk of aggressive behavior than a woman without psychological abuse. Victimization also places adolescents at higher risk of psychological and behavioral disturbances, including aggressive behavior (Gaylord-Harden et al., 2015).

Another risk factor for aggression is the family pattern. Negative engagement with family affects aggressive behavior (Estévez Lópe et al., 2018). This research revealed that 10.3% of respondents had parental divorce history. As such, the parental divorce history has a 2.21-time risk of influencing aggressive behavior. Another study also explained that negative relationships and family conflict

contribute to aggressive behavior (Jiménez & Estévez, 2017).

### **Anxiety and aggressive behavior as adolescents' behavioral health problems**

Behavioral problems and some mental health disruptions most occur in adolescents (Moes, 2021; Nebhinani & Jain, 2019). Behavioral problem is defined as bad actions or behaviors which are undesirable by the community and at risk of mental disorders (Hasan & Husain, 2016; McLafferty et al., 2017; Nebhinani & Jain, 2019). This research uncovered that 70.9% of adolescents experienced anxiety, with 37.8% at moderate levels and 19.7% at extremely severe levels. In this regard, extremely severe anxiety is a terrible state and a high risk of developing panic disorder. At that level, adolescents will experience decreased concentration, a narrowing of the perceptual field, and very disturbing physical conditions (Anyan & Hjemdal, 2016). This extremely severe anxiety also highly decreases the space of thinking or perception. Individuals only focus on a detailed and specific issue. In addition, all behavior is only aimed at decreasing tensions. The individual also has difficulty focusing on other issues (Videbeck, 2020). In this study, the mean anxiety score was 11.81 (moderate level of anxiety). A moderate level of anxiety is a marker of poor adolescent mental health conditions. Moderate anxiety lets individuals focus on principal issues and rule out others. This anxiety also isolates the perception space but is not as bad as the extremely severe anxiety category.

Behavioral health problems, such as aggressive behavior, also occur in adolescents. Aggressive behavior is when a person causes harm verbally or non-verbally to another person. Aggressive behavior is also seen as disappointing, hindering, and inhibiting others. Aggressive behavior includes attacking, feeling angry, and hostile actions. This research uncovered that 79,8% of adolescents experienced aggression, with 43.7% at a moderate level and 18.3% at a severe level. In this case, aggressive behavior occurred both verbally and physically, such as hostility and anger. Besides, females tend to do verbal aggression, while males tend to do it non-verbally or physically. Nevertheless, some studies demonstrated that females and males are equally aggressive when they

receive provocations or attacks from their peer group (Denson et al., 2018; Liu, Jianghong; Lewis, Gary; Evans, 2013).

Further, the research's primary finding is that there is a relationship between anxiety and aggressive behavior. The research result revealed a statistically positive and strong relationship between anxiety and aggressive behavior (p-value 0.0001, CI 95%, r: 0.641, and odd ratio 7.86). In other words, anxiety had a 7.86-time risk of influencing aggressive behavior. Moreover, the finding is consistent with previous studies. A correlation between anxiety and aggression has been disclosed in previous studies. A study showed that a higher anxiety risk was associated with total aggression scores (Chung et al., 2019). Another study reported a positive relationship between anxiety and aggression in adult age (Wehde, 2020).

Furthermore, anxiety contributes to psychological disturbance and behavioral health problems, such as aggressive behavior. Also, anger and verbal aggression (indirect aggressive behavior) are more closely related to anxiety than physical aggression (Chung et al., 2019). A previous study explained that when adolescents had anxiety, they had attention to the social threat that supported aggressive behavior (hostile aspects). Social threat and aversive attribution bias were mediators of anxiety toward aggressive behavior (Waite et al., 2015; Wehde, 2020).

### **CONCLUSION**

There is a positive and strong association between adolescents' anxiety and aggressive behavior. In other words, adolescents with higher anxiety will have higher aggressive behavior. Hence, community mental health nurses in public health centers should provide a partnership program with senior high schools to conduct a comprehensive mental health promotion program to improve adolescents' mental health.

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**Table 1. Characteristics of adolescents (n=594 respondents)**

<b>Variable</b>	<b>f</b>	<b>%</b>
Gender		
Female	403	67.8
Male	191	32.2
Bullying victim history		
Yes	266	44.8
No	328	55.2
Violence victim history		
Yes	79	13.3
No	515	86.7
Parental divorce history		
Yes	61	10.3
No	533	89.7

**Table 2. Anxiety and aggressive behavior in adolescents (n=594 respondents)**

<b>Variables</b>	<b>Mean; SD</b>	<b>P-value</b>
Anxiety	11.81; 7.12	0.0001
Aggressive behavior	78.79; 14.68	