



Aggressiveness Level of Martial Arts Participants in Children

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Abstract

This study aims to determine the existence of martial arts concerning the level of aggressiveness in children. This study used quantitative methods with a comparative ex post facto causal design. The population in this study is children aged 10-12 years who live in West Java with categories of martial arts participants including taekwondo, pencak silat, and karate and the non-martial arts category. The study sample amounted to 118 from each group. Sampling techniques using purposive sampling by determining research needs criteria. The data collection technique uses a questionnaire totaling 29 questions with 4 components of aggressiveness, namely: physical aggressiveness, verbal aggressiveness, anger, and hostility. Data analysis techniques use SPSS by conducting descriptive statistical tests, normality tests, homogeneity tests, and Wilcoxon tests. Wilcoxon test results obtained significance values (sig. 2-tailed) of $0.000 < 0.05$, so H_0 was accepted. So, there is an average difference between martial arts participants and non-martial arts participants in terms of aggressiveness. There is a difference in the level of aggressiveness between martial arts participants and non-martial arts participants as evidenced by the average score of pencak silat participants being relatively high compared to the average score of non-pencak silat participants. The type of aggressiveness that is greatest among martial arts participants is hostile aggressiveness and the type of martial arts that gives rise to the greatest hostile aggressiveness is pencak silat martial arts. This can be seen from the descriptive statistics of the average scores of the two groups which state that the highest aggressiveness in pencak silat participants is hostile attitudes.

How to Cite

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INTRODUCTION

Cases of child bullying in the last 2 years are still very high; based on KPAI data, in 2021, there were 5953 cases, and in 2022 there were 4683 cases. However, bullying cases are one of the cases that are still rampant, especially among children who are vulnerable to becoming victims (Ramadhanti & Hidayat, 2022). Targeted children are usually associated with children who have a tendency to anxiety, low self-esteem, and loneliness, which attracts the perpetrators (García-Fernández et al., 2023). This has led to the prevalence of physical violence, verbal violence, and even alienation experienced by child victims (Oktaviani & Ramadan, 2023), and often the perpetrators are peers (Laith & Vaillancourt, 2022). Boys are more likely to be the perpetrators of bullying than girls, and boys tend to often engage in physical activities that are external and direct bullying, but it does not rule out the possibility if the bully is a girl who tends to engage in internal and verbal bullying, especially usually the perpetrator deliberately does it in an aggressive way on physical, verbal and even psychological activities (Xie et al., 2022).

Aggressiveness is closely related to physically threatening behaviours such as kicking, hitting, or pushing (Zhu et al., 2022). Still, instrumental aggressiveness is needed in fighting to gain points and advantages over opponents in a race (Rydzik, 2022). Bullying behaviour is closely related to aggressiveness and physical activity because, based on longitudinal studies, physical aggressiveness shows long-term adverse outcomes that lead to physical violence, intimidation and even verbal violence that causes mental disorders (Zhu et al., 2022). Children and even adults often carry out various physical activities and sports, and they state that it is a martial activity that most affects the level of aggressiveness. Research (Harwood et al., 2017) states that martial arts reduce aggression, violent behaviour, rule violations and impulsive behaviour. However, research (Dong, 2017) states that the existence of martial arts becomes an invisible house of violent practices because martial arts students are involved in structural, symbolic and normal violence.

Because high levels of aggressiveness can influence bullying cases, there is a contradictory paradigm between the positive and negative impacts related to children's participation in martial arts activities. It could be that the bully who is of the same age is the one who participates in martial arts activities (van der Kooi, 2020) because martial arts activities are indicated to make

children more aggressive, so children's efforts to intimidate victims are more significant (Solari, 2014), even martial arts activities are indicated to bridge terrorism behaviour (van der Kooi, 2020), so it is feared that martial arts participants can trigger cases of bullying in children. However, physical martial arts activities based on systematic reviews and meta-analyses can reduce the level of aggressiveness in children (Ouyang & Liu, 2023), so children's participation in martial arts activities also has positive impacts, such as self-control training efforts (Hollander & Cunningham, 2020), reducing internalization symptoms (Marusak et al., 2022), controlling emotion regulation and behaviour regulation (Phung & Goldberg, 2019), having fraternal values, truth values and the value of devotion to God (Ruswinarsih et al., 2023).

Martial arts is like a vast place that contains many varied elements, including mind and spirit awareness, physical strength and agility (Sandford et al., 2021). In principle, martial arts involve fighting in direct physical confrontation (Borges, 2022). Martial arts encourage the participants to fight as much as possible without feeling aggressive through the ritualization of moves, respect for the teacher and training awareness of the importance of meditation and philosophies of self-control, humanity and peace (Harwood et al., 2017). Martial arts are not always about fighting (Cynarski, 2019), but they also humanise people (Cynarski, 2022). Martial arts (pencak silat, karate and taekwondo) are becoming very popular among children, typically children aged 10-12 (Gubbels et al., 2016). Because martial arts (pencak silat, karate, and taekwondo) are popular among children, researchers are interested in examining the level of aggressiveness in children participating in these martial arts.

Epistemologically, the martial art of pencak silat is a psychophysical experience of self-control and overcoming one's weaknesses (Cynarski, 2017), through the effects of long-term training progress so that it can be mastered (Cynarski, 2023).

Karate is a martial art associated with a way of life with moral principles and behavioural patterns (Tomas & Saragoça, 2018). Karate intervenes in children learning to face rules and respect others (Gubbels et al., 2016).

Taekwondo is one of the sports that has high competitive intensity (Zhang & Wang, 2023), which is often contested with victory or defeat involving a fight between 2 athletes through kicks or punches (Kim et al., 2023). Thus, it can be said that taekwondo martial arts is one martial

arts whose goal is to win in a real fight for life (Cynarski, 2019).

Martial arts are high-contact sports that make martial arts participants more aggressive (Bredemeier et al., 2016). However, martial arts positively impact self-regulation and violence prevention in schools (Theeboom et al., 2009). The role of martial arts seems to have a paradoxical position, so there is a need for further research on the role of martial arts on the level of aggressiveness in children.

From the explanation that has been put forward, the author analyzes the level of aggressiveness of children participating in martial arts and children not participating in martial arts with an age range of 10-12 years to reveal the relationship between the level of aggressiveness and cases of bullying experienced by children. The author also examines the level of aggressiveness between the three martial arts as an effort to reveal the facts. Based on the background, there are two formulations of the problem in this study. Namely, the first, is there an influence of martial arts participant activities on the level of aggressiveness of children? and the second, is there a difference in the influence of the level of aggressiveness on children who participate in martial arts and those who do not participate in martial arts?. Thus, the purpose of this study is to determine the influence of martial arts participant activities on the level of aggressiveness of children and to determine the difference in the influence of the level of aggressiveness on children who participate in martial arts and those who do not participate in martial arts.

METHODS

This study aims to determine the relationship between two variables with a comparative causal ex post facto research design to find the reasons that cause changes in the independent variable (Bunari et al., 2023) without providing treatment. The data collected consisted of two variables with the following research design:

Table 1. Causal Comparative Research Design (Fraenkel, Jack R., Wallen, 2009)

Group	Independent Variable	Dependent Variable
I	X1 Martial Arts Participants	YA Aggressiveness
II	X2 Control	Y Aggressiveness

In this study, the authors used a comparative ex post facto design to compare samples in two groups. Research that takes two groups is divided into groups that seem to be given treatment and groups that are not so that they function as comparisons. Thus, to facilitate research, a modified comparative research design is needed. It can be seen in **Table 2** namely:

Table 2. Modified Comparative Causal Research Design (Fraenkel, Jack R., Wallen, 2009)

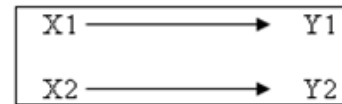


Image caption:

X1 = Martial Arts Participant Group

X2 = Control Group

Y = Aggressiveness

Table 3. Buss-Perry Questionnaire

Components	Factors
1. Physical Aggression	1. Once in a while I can't control the urge to strike another person.
	2. Given enough provocation, I may hit another person.
	3. If somebody hits me, I hit back.
	4. I get into fights a little more than the average person.
	5. If I have to resort to violence to protect my rights, I will.
	6. There are people who pushed me so far that we came to blows.
	7. I can think of no good reason for ever hitting a person.
	8. I have threatened people I know.
	9. I have become so mad that I have broken things.
	10. I tell my friends openly when I disagree with them.
	11. I often find myself disagreeing with people.
2. Verbal Aggression	12. When people annoy me, I may tell them what I think Of them.
	13. I can't help getting into arguments when people disagree with me.
	14. My friends say that I'm somewhat argumentative.

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| | 15. My friends say that I'm somewhat argumentative. |
| | 16. When frustrated, I let my irritation show. |
| | 17. I sometimes feel like a powder ready to explode. |
| 3. Anger | 18. I am an even-tempered person |
| | 19. Some of my friends think I'm a hothead. |
| | 20. Sometimes I fly off the handle for no good reason. |
| | 21. I have trouble controlling my temper. |
| | 22. I am sometimes eaten up with jealousy. |
| | 23. At times I feel I have gotten a raw deal out of life. |
| | 24. Other people always seem to get the breaks. |
| | 25. I wonder why sometimes I feel so bitter about things. |
| 4. Hostility | 26. I know that friends "talk about me behind my back." |
| | 27. I am suspicious of overly friendly strangers. |
| | 28. Sometimes feel that people are laughing at me behind my |
| | 29. When people are especially nice, I wonder what they want. |

The population of this study were children aged 10-12 years who were taken from children participating in martial arts and children not participating in martial arts who live in West Java. The sampling technique uses purposive sampling with the hope of answering problems based on determining the criteria for research needs (Isaac, 2023). The instrument used in this study is the Buss-Perry questionnaire test with a Likert scale format of 5 (1: strongly does not reflect me, 2: does not reflect me, 3: may reflect me, 4: reflects me and 5: strongly reflects me) to assess the level of aggressiveness with 29 factors consisting of 4 components of aggression (physical aggression, verbal aggression, anger and hostility) (Buss & Perry, 1992).

The data collection technique uses a questionnaire by distributing questionnaires to respondents who live in West Java, respondents aged 10-12 years; respondents are martial arts participants and non-participants in martial arts. The data.

RESULTS AND DISCUSSION

The research results on distributing questionnaires on the aggressiveness of martial arts participants in children, both martial arts participants and nonparticipants of martial arts, each amounted to 118 people.

Based on the martial arts participant group gets a minimum value of 33, a maximum value of 108, a mean of 74.25, a standard deviation of 16.426 and a variance of 269.838. at the same time, the nonparticipant group gets a minimum value of 29, a maximum value of 110, a mean of 71.83, a standard deviation of 14.345 and a variance of 205.766. Furthermore, the normality test will be continued for the conditions for conducting an independent t-test analysis.

Based on the normality test was carried out with Kolmogorov-Smirnov because the sample studied was more than 50. The normality test results for the martial arts participant group obtained a significance of 0.046, while the non-martial arts participant group obtained a significance value of 0.13. So, the normality test of the martial arts and non-martial art groups showed that the data were not normally distributed because the significance value obtained was < 0.05 , so H_0 was rejected.

Based on the homogeneity test in the martial arts participant and non-participant groups obtained a significance value of 0.187, so the data is homogeneous. Based on the prerequisite tests that have been carried out, the data is known to be abnormal but homogeneous, so the results of hypothesis testing are carried out using the Wilcoxon test

Based on the Wilcoxon test obtained a significance value (2-tailed) of $0.00 < 0.05$, so H_1 is accepted based on the following hypothesis:

H_0 = There is no difference in the activities of martial arts participants and non-martial arts participants on the level of aggressiveness of children.

H_1 = There is a difference in the activities of martial arts participants and non-martial arts participants on the level of children's aggressiveness.

Basis for decision making:

If the significance value (2 tailed) $> 0,05$ them H_0 is accepted/ H_1 is reject.

If the significance value (2 tailed) $< 0,05$ them H_0 is rejected/ H_1 is accepted

So, it can be concluded that there is a dif-

ference in the level of aggressiveness of martial arts participants and non-martial arts participants because the results of the significance value (2 tailed) $0,000 < 0,05$ H1 are accepted.

Based on the results of the descriptive statistics above, because the average value of martial arts participants (74.25) is greater than the average value of non-martial arts participants (71.83), it is assumed that martial arts participants are more likely to commit aggressiveness than non-martial arts participants. Thus, a child's participation in martial arts activities affects the child's level of aggressiveness. However, to provide a detailed explanation, researchers measured the level of aggressiveness in martial arts participants.

Based on the results of the descriptive statistics above, because the average hostility (23.92) is more significant than physical aggressiveness (18.89), verbal aggressiveness (13.66) and anger (17.77), it can be concluded that the highest level of aggressiveness in martial arts participants is hostility. However, the researcher will explain the types of martial arts in more depth, along with the level of aggressiveness, in **Table 1**.

Table 1. Descriptive Statistics of Martial Arts Type and Aggressiveness Type

		N	Mean	Std. Deviation	Std. Error Mean
Physical Aggression	Taekwondo	17	20.65	4.782	1.160
	Pencak Silat	93	18.56	5.543	.575
	Karate	8	19.00	4.472	1.581
	Total	118	18.89	5.387	.496
Verbal Aggression	Taekwondo	17	14.29	4.413	1.070
	Pencak Silat	93	13.62	3.563	.369
	Karate	8	12.75	3.991	1.411
	Total	118	13.66	3.703	.341
Anger	Taekwondo	17	17.29	5.632	1.366
	Pencak Silat	93	17.95	5.961	.618
	Karate	8	16.75	8.664	3.063
	Total	118	17.77	6.074	.559
Hostility	Taekwondo	17	22.76	7.023	1.703
	Pencak Silat	93	24.25	5.620	.583
	Karate	8	22.63	6.232	2.203
	Total	118	23.92	5.856	.539

Based on **Table 1** the descriptive statistics results above, the highest average aggressiveness was obtained by hostility with the martial art of pencak silat (24.25) higher than the martial art of taekwondo (22.76) and the martial art of karate (22.63). Therefore, it can be concluded that children's participation in the martial art of pencak

silat has high aggressiveness compared to the martial art of taekwondo and the martial art of karate in the type of aggressiveness of hostility.

This study aims to measure the level of aggressiveness of martial arts participants in children by comparing the level of aggressiveness of martial arts participants and the level of aggressiveness of non-martial arts participants. Based on the results of the research and data analysis regarding "The Level of Aggressiveness of Martial Arts Participants" Based on the hypothesis test that has been conducted, a significance value (2-tailed) of $0.000 < 0.05$ was obtained, so H0 was rejected and H1 was accepted. This means that there is a difference in the level of aggressiveness of martial arts participants and non-martial arts participants, martial arts participants have a higher average value compared to the average value of non-martial arts participants, namely (74.25) > (71.83). Therefore, further statistical tests were conducted to analyze the type of martial arts and the type of aggressiveness of the sample so that the type of aggressiveness with the highest average in martial arts participants was hostility (23.92) compared to physical aggressiveness (18.89), verbal aggressiveness (13.66) and anger (17.77), hostility in pencak silat martial arts obtained the highest average value (24.25) compared to the average value of taekwondo martial arts hostility (22.76) and karate martial arts hostility (22.63). In his research, (Buss & Perry, 1992) revealed that anger is a trigger for other aggressiveness, including: physical aggressiveness, verbal aggressiveness and hostility. So the results of the author's research are in line with the statement with the average value obtained for anger aggressiveness in the martial art of pencak silat (17.95) higher than taekwondo (17.29) and karate (16.75). So, it can be said that the average value of hostility in the martial art of pencak silat is higher than in taekwondo and karate.

Based on the results of the study, hostility is the highest aggressiveness in pencak silat martial arts participants compared to other aggressiveness. Martial arts are combat sports that are the subject of disputes (Lafuente et al., 2021). Hostility arises because of negative feelings as an attribute of hostile intentions (Alsem et al., 2022). So it can be said that threats are one of the attributes of hostile intentions that arise due to peer rejection so negative feelings often arise that interfere with children's social functioning. Negative feelings become bad prejudices that are felt, causing alertness. The author argues that the question item on aggressive hostility has the meaning of alertness, considering that in martial

arts alertness is a point that is needed when associated with the existence of martial arts in sports achievements, because alertness effectively detects stimuli and responds appropriately in deciding the situation (Sanabria et al., 2019). Martial arts have functional meaning in combat and training situations that will involve attack and defense skills (Sun et al., 2024). Because, the essence of martial arts is attacking and defending as well as practicing offensive and defensive techniques (Xu & Guodong Zhang, 2019).

So, it can be said that the existence of children's participation in martial arts activities is one of the factors in the emergence of aggressiveness in children due to the tendency for routine applications of martial and scientific practices in martial arts to be carried over into daily life activities. Even though the application of martial arts in competition is very necessary to win a match, its application in everyday life has a negative impact because it disturbs other people by attacking with punches or even kicks which will injure people. Martial arts are activities that are limited by formal rules by determining the conditions of time, place, appropriateness and procedures for fighting. So the rules governing the conditions for when and where martial arts can be practiced are limited to certain times and spaces (Martinkova & Parry, 2016). Therefore, martial arts participants should not use their skills carelessly, especially to hurt other people with these skills.

The causes of bullying are related to environmental characteristics and a person's individual characteristics (Vveinhardt & Kaspars, 2024). Bullying behavior is related to the environment in which a person is raised and interacts, because seeing violence in the family will certainly change a person's individual characteristics and traits (Wu et al., 2024). The environment is very influential on a child's development, it is not uncommon for children to imitate behavior that is seen and observed in the environment, such: imitating the behavior of their peers, imitating the behavior of parents who say harsh words, imitating fighting actions, lying, imitating physical violence and other behavior, who violate norms (Denissa & Dasalinda, 2023).

CONCLUSION

The existence of children's participation in martial arts activities has been proven to make children more aggressive than children who do not participate in martial arts activities, because martial arts participants get a higher average aggressiveness score than non-martial arts participants.

Thus, there is a difference in the aggressiveness of martial arts participants and non-martial arts participants and shows that children's participation in martial arts activities who are accustomed to being aggressive in matches is carried over into everyday life and harms others. Hostile aggressiveness is the most frequent action taken by martial arts participants and the martial art of pencak silat is the peak of hostile aggressiveness perpetrators due to the tendency of routine application of material and scientific practices in martial arts to be carried over into everyday life activities. Further research is needed to strengthen these findings, including involving larger samples and various types of martial arts, so as to further explore the influence of martial arts types on children's levels of aggressiveness.

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