

EFFECTIVENESS OF FLASHCARD EDUCATION ON STUDENTS' KNOWLEDGE ABOUT BULLYING AT SDN 3 PEKANBARU

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Abstract

Bullying can be defined as aggressive behavior that is repeatedly carried out by individuals or groups towards others who are perceived as weaker. Pediatric nurses play a crucial role in detecting and addressing bullying. Education is key in preventing bullying. This study aimed to assess the effectiveness of using flashcards in improving elementary school students' knowledge of bullying. The research method used a quasi-experimental design, specifically the One-Group Pretest-Posttest Design. The study subjects were 18 fifth-grade students aged 10-12 years. The research was conducted over the course of 1 day, and simple random sampling was used. Data were collected using a questionnaire on bullying knowledge, with validity test results (r-values) ranging from 0.529 to 0.740 (higher than 0.444), and reliability with a Cronbach's Alpha value of 0.763. Before education using flashcards, students' knowledge of bullying was measured via a pretest, with an average score (mean) of 80.83, a median of 85, and a range from 60 to 100. Afterward, the students received education using flashcards, and a posttest was conducted. The posttest showed a mean score of 91.94, a median of 95, with scores ranging from 80 to 100. The results indicated a significant improvement in knowledge, with the average score increasing from 81.25 (before education) to 92.50 (after education). The Wilcoxon test analysis showed a p-value of 0.000, which is less than $\alpha = 0.05$, indicating that the use of flashcards had a significant positive effect on increasing students' knowledge about bullying.

Keywords: children; Bullying; health education; flashcard

INTRODUCTION

Bullying is a serious global problem that affects children worldwide, transcending national and cultural boundaries. Global data suggests that one in two children aged 2–17 years experience some form of violence, and one-third of students aged 11–15 years are victims of peer bullying. This issue manifests in various forms, such as physical, verbal, or social violence in schools, and is considered a public health concern requiring serious attention [28].

Indonesia is ranked fifth globally out of 78 countries for the highest number of bullying cases in the educational sector [4]. Programme for International Student Assessment (PISA) studies indicate that approximately 42% of 15-year-old students in Indonesia have experienced violence and bullying in the past month. In 2023, the Indonesian Child Protection Commission (KPAI) recorded 3,547 cases of violence against children, with 861 cases occurring in schools, including 87 cases of bullying [6]. Data from the Ministry of Women Empowerment and Child Protection in 2024 revealed 641 cases of violence against women and children in Riau Province, with Pekanbaru city recording the highest number (134 cases), 33 of which occurred in schools [13].

The primary school level has become the largest contributor to bullying cases in Indonesia, with a significant upward trend reported by KPAI and the Indonesian Teachers Federation (FSGI). Cases jumped from 119 in 2020 to 226 in 2022, with 26% occurring at the elementary school level [4]. This highlights the urgent need for intensive prevention efforts among young students. Bullying is defined as repetitive aggressive behavior by an individual or

group toward someone perceived as weaker. Its impacts are severe and long-lasting, including mental health issues such as depression, anxiety, low self-esteem, and academic problems [27]. Education is crucial for prevention, requiring comprehensive programs that explain the definition, types, and impacts of bullying, emphasizing that it is unacceptable behavior [26]. Interactive learning methods, such as visual presentations, group discussions, role-play, and educational games like flashcards, are essential for engaging students and enhancing understanding [26]. Flashcards, which use cards with visual and textual information, transform learning into an interactive and engaging process, making them suitable for students to grasp and retain concepts [3]. This study aims to investigate the effectiveness of using flashcards as an educational medium to improve students' knowledge about bullying at SDN 3 Pekanbaru.

RESEARCH METHODS

This study employed a quantitative research approach with a Quasy experiment One-Group Pretest-Posttest Design. The research was conducted at Sekolah Dasar Negeri 3 Pekanbaru, located on Jalan Kesehatan No. 35, Kampung Bandar, Senapelan District, Pekanbaru City, Riau Province. The target population was all 5th-grade students at SDN 3 Pekanbaru.

The sampling technique used was Stratified Sampling, resulting in a sample size of 18 respondents who received a single flashcard-based educational intervention. The instrument utilized for data collection was a knowledge questionnaire consisting of 20 questions. Prior to its use in the study, the questionnaire underwent validation.

RESEARCH RESULTS

The characteristics of the respondents, the distribution of pre- and post-education knowledge scores, and the results of the intervention analysis are presented in the following tables:

Table 1. Distribution of Respondents by Gender

No	Gender	Frequency	Percentage
1	Male	11	61.1
2	Female	7	38.9
Total		18	100

Source: Primary Data

Based on Table 1, the majority of respondents were **male**, accounting for 11 individuals (61.1%), while female respondents totaled 7 individuals (38.9%).

Table 2. Distribution of Respondents by Age

Age	Mean	Median	Min	Max	SD
	10.61	11	10	12	0.608

Source: Primary Data

Table 2 shows that the average age (**mean**) of the respondents was 10.61 years, with a median of 11, a minimum age of 10, and a maximum age of 12 years.

Table 3. Distribution of Mean Scores Before and After Education

Knowledge Score	N	Mean	Median	Min	Max	SD
Before Education (Pre-Education)	18	80.83	85	60	100	11.328
After Education (Post-Education)	18	91.94	95	80	100	6.831

Source: Primary Data

Table 3 illustrates that the average knowledge score increased from \$80.83\$ before the intervention to 91.94 after the flashcard education. The standard deviation also decreased from 11.328 (pre-test) to 6.831 (post-test).

Table 4. Distribution of Differences in Education Provision Before and After

Variable	Mean Rank	Sum Rank	p-value
Pretest - Posttest	9.00	153.00	0.000

Source: Primary Data

The results of the Wilcoxon Signed Ranks Test (Table 4) show a p-value of 0.000, which is less than the significance level of 0.05.

DISCUSSION

The study found that the majority of the respondents were male (61.1%), which aligns with other research such as that by Noya, Taihuttu, and Kiriwenno [18], where over half of the respondents were also male (61%). This may be attributed to the sociological context that often links male students to a higher propensity for engaging in bullying behavior as a means to build status or display dominance and masculinity within peer groups. The mean age of respondents was 10.61 years, consistent with other studies on bullying among elementary school students, such as that by Octavia, Mefrie, and Loriza [19], suggesting that this age is a critical stage for interventions due to significant developmental changes.

The core finding is the significant improvement in students' knowledge about bullying after receiving education using flashcards. The average knowledge score increased substantially from 80.83 (pre-test) to 91.94 (post-test). This increase suggests that the educational intervention was effective. The statistical analysis using the Wilcoxon Signed Ranks Test yielded a p-value of 0.000 (less than 0.05), confirming a statistically significant difference in knowledge scores before and after the flashcard education.

This outcome supports the hypothesis that targeted education, especially with interactive methods, is a strategic step in preventing bullying. The flashcard medium, which provides visual and easily memorable information, proved to be highly suitable for elementary school students. This demographic generally responds better to visual and interactive learning materials, facilitating a clearer understanding and better retention of information regarding the definition, forms, and impacts of bullying. The reduced standard deviation in the post-test scores also suggests that the education was consistently effective across the group, raising the minimum knowledge level and narrowing the gap among students' scores. The effectiveness of flashcards in improving knowledge aligns with the principles of child development, as practical and visual learning engages them more deeply.

CONCLUSION

Based on the results of the study on the effectiveness of flashcard-based education at SDN 3 Pekanbaru regarding bullying, the following conclusions are drawn:

1. Respondent characteristics showed that out of 18 students, the majority were male (11 individuals, 61.1%). The average age was 10.61 years, with a minimum age of 10 and a maximum age of 12 years.
2. There was a significant improvement in knowledge. The average knowledge score increased from 80.83 (pre-education) to 91.94 (post-education), with the minimum score increasing from 60 to 80.
3. The Wilcoxon Signed Ranks Test, with a p-value of 0.000 (less than 0.05), indicates that the education using flashcards had a significant influence on the students' knowledge about bullying at SDN 3 Pekanbaru.

The use of flashcard education is effective because it is a visual and practical learning tool that is engaging for elementary school-aged children, thereby increasing their participation and understanding of anti-bullying concepts.

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