The Effectiveness of Group Guidance Using Anti-Bullying Puzzle Media on Junior High School Students Awareness of Bullying Behavior

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Abstract
This study aims to examine the effectiveness of group guidance services utilizing anti-bullying puzzle media in improving junior high school students' awareness of bullying behavior. Bullying remains a prevalent issue in educational settings, particularly at the junior high school level, where students often demonstrate limited awareness of its forms and impacts, leading to the persistence and normalization of such behavior. To address this problem, a quantitative approach with a quasi-experimental pretest–posttest control group design was employed. The participants consisted of 40 eighth-grade students from SMP Negeri 6 Metro, selected through purposive sampling and divided into an experimental group and a control group, each comprising 20 students. The experimental group received group guidance services integrated with anti-bullying puzzle media, while the control group received conventional group guidance without the media. Data were collected using a 25-item bullying awareness questionnaire with confirmed validity and reliability (Cronbach's Alpha > 0.70). Data analysis included paired sample t-tests, independent sample t-tests, and N-Gain analysis. The results indicated that both groups experienced significant improvements in bullying awareness; however, the experimental group showed a significantly higher increase compared to the control group. The posttest results revealed a significant difference between groups (p < 0.05), and the N-Gain score in the experimental group was categorized as moderate, while the control group was in the low category. These findings suggest that the integration of anti-bullying puzzle media enhances the effectiveness of group guidance services by promoting active participation, engagement, and deeper understanding. In conclusion, anti-bullying puzzle media can serve as an innovative and effective approach in preventive guidance and counseling services to improve students' awareness of bullying behavior in schools.

Keywords: Bullying awareness, Experimental study, Group guidance, Puzzle media, Student behavior.

Introduction

Bullying is an aggressive behavior carried out intentionally and repeatedly by an individual or group who possess greater power over a weaker individual, whether physically, verbally, or psychologically (Olweus, 1994; Santoso, 2018; Alexandria & Lega, 2025). This behavior not only affects victims but also has broader implications for the educational environment, including disruptions to students' social, emotional, and academic development, as well as the deterioration of a conducive learning climate in schools (Andini et al., 2024; Haq, B. I., Rochmawati, D. H., & Susanto, W., 2025).

At the junior high school level, bullying cases remain prevalent in various forms, such as physical, verbal, and social bullying (Nasir, 2018; Ballerina & Immanuel, 2019; Diannita et al., 2023). This condition indicates that students' awareness of the forms and impacts of bullying is still relatively low, leading to the persistence of such behaviors and their normalization within peer interactions (Rosmi et al., 2023; Yuliyanti &

Juliangkary, 2023). Therefore, systematic preventive efforts are needed through guidance and counseling services that are not only informative but also actively engage students in meaningful social learning processes.

One of the services that has the potential to enhance students' social awareness is group guidance. This service provides opportunities for students to learn through social interaction, discussion, and direct experience, enabling reflection on their own behavior and social environment (Miftahul Jannah et al., 2024). Through group dynamics, students are encouraged not only to acquire knowledge but also to develop empathy, social perspective, and awareness of the consequences of their actions, including bullying behavior.

To increase the effectiveness of group guidance services, innovative and engaging media are required to stimulate students' participation. One potential approach is the use of educational game-based media, such as puzzles. Puzzle media involve cognitive, visual, and motor activities simultaneously, creating an interactive learning experience. Anti-bullying puzzles are specifically designed to deliver moral messages, introduce types of bullying, and highlight their negative impacts in an engaging and enjoyable manner. The use of game-based media has been shown to enhance learning motivation, active participation, and deeper conceptual understanding among students (Setyaningrum et al., 2018; Sugianto, 2023).

Previous studies have demonstrated that educational game media are effective in increasing social awareness and reducing bullying behavior among students (Andriani et al., 2019; Ruliyatin & Ridhowati, 2021). However, most of these studies have focused on information services or classroom-based learning contexts, rather than integrating such media into group guidance services. Furthermore, research specifically examining the effectiveness of anti-bullying puzzle media in improving students' awareness at the junior high school level remains limited.

Based on this condition, a research gap can be identified in the limited integration of anti-bullying puzzle media within group guidance services, particularly as a preventive strategy to enhance students' awareness of bullying behavior. In addition, studies employing experimental designs with control groups in this context are still scarce. Therefore, this study offers a novel contribution by integrating anti-bullying puzzle media into group guidance services as an innovative approach to improving students' awareness of bullying.

This study aims to examine the effectiveness of group guidance services based on anti-bullying puzzle media in improving junior high school students' awareness of bullying behavior. The findings are expected to provide both empirical and practical contributions to the development of more innovative, participatory, and preventive guidance and counseling services in addressing bullying issues in schools.

Method

This study employed a quantitative approach using a quasi-experimental design with a pretest–posttest control group structure (Rogers & Revesz, 2019). This design was selected to examine the causal effect of the intervention by comparing changes in outcomes between an experimental group and a control group. The participants of this study consisted of 40 eighth-grade students from SMP Negeri 6 Metro, who were selected through purposive sampling based on predetermined criteria relevant to the research objectives. The sample was divided into two groups: an experimental group

comprising 20 students and a control group comprising 20 students. The experimental group received the intervention in the form of group guidance services utilizing anti-bullying puzzle media, while the control group received conventional group guidance services without the use of such media.

The primary data collection instrument was a bullying behavior awareness questionnaire consisting of 25 items measured on a four-point Likert scale. The instrument was designed to assess several dimensions, including students' understanding of the definition of bullying, recognition of various forms of bullying, and attitudes and responses toward bullying behavior. Prior to its administration, the instrument underwent content validity evaluation by subject-matter experts to ensure its relevance and representativeness. Furthermore, reliability testing using Cronbach's Alpha yielded a coefficient greater than 0.70, indicating that the instrument possessed satisfactory internal consistency.

The research procedure commenced with the administration of a pretest to both the experimental and control groups to establish baseline equivalence in bullying awareness levels (Williams et al., 2022). Subsequently, the experimental group participated in group guidance sessions incorporating anti-bullying puzzle media as an instructional tool. The intervention was conducted over three sessions, each lasting approximately 40 minutes. The implementation of group guidance followed structured stages, including the formation stage, transition stage, core activity stage involving interactive engagement with the anti-bullying puzzle media, and the closing stage. In contrast, the control group received group guidance services following similar procedural stages and duration but without the integration of puzzle media.

Upon completion of the intervention, a posttest was administered to both groups to measure changes in students' awareness of bullying behavior. The collected data were analyzed using inferential statistical techniques. A paired sample t-test was employed to examine within-group differences between pretest and posttest scores, while an independent sample t-test was conducted to compare posttest outcomes between the experimental and control groups. The normalized gain (N-Gain) analysis was utilized to assess the magnitude of improvement in bullying awareness levels in each group, thereby providing a more comprehensive understanding of the intervention's effectiveness.

Results and Discussion

To provide an initial overview of the data distribution, descriptive statistics were conducted to examine students' levels of bullying awareness before and after the intervention.

Table 1. Descriptive Statistics of Pretest and Posttest Scores

Group	Test	Mean	Std. Deviation
Experimental Group	Pretest	62.40	6.25
Experimental Group	Posttest	82.10	5.80
Control Group	Pretest	63.10	6.10
Control Group	Posttest	70.25	6.45

Table 1 illustrates that both groups initially exhibited relatively similar levels of bullying awareness, as reflected in the pretest mean scores of 62.40 for the experimental group and 63.10 for the control group. This indicates that the two groups were relatively

equivalent at baseline, thereby supporting the validity of subsequent comparisons. Following the intervention, a substantial increase in the posttest mean score was observed in the experimental group, rising to 82.10. In contrast, the control group showed a more modest improvement, with a posttest mean score of 70.25. These findings suggest that while both groups experienced some level of improvement, the magnitude of change was considerably greater in the experimental group. This pattern indicates that the integration of anti-bullying puzzle media within group guidance services may have contributed to a more meaningful enhancement in students' awareness compared to conventional approaches. The interactive and engaging nature of game-based learning media has been shown to facilitate deeper understanding and active participation (Setyaningrum et al., 2018; Sugianto, 2023), which may explain the observed differences in learning outcomes.

To examine whether the observed improvements within each group were statistically significant, paired sample t-tests were conducted.

Table 2. Paired Sample t-Test Results

Group	Mean Difference	t-value	Sig. (2-tailed)
Experimental Group	19.70	9.215	0.000
Control Group	7.15	3.102	0.006

As presented in Table 2, the experimental group demonstrated a statistically significant increase in bullying awareness scores, with a mean difference of 19.70 and a significance value of 0.000 ($p < 0.05$). This indicates that the intervention using anti-bullying puzzle media had a strong effect on improving students' awareness levels. Similarly, the control group also showed a statistically significant improvement, with a mean difference of 7.15 and a significance value of 0.006 ($p < 0.05$). This finding suggests that group guidance services, even without the use of puzzle media, still contribute positively to increasing students' awareness.

However, it is important to note that the magnitude of improvement in the experimental group was substantially higher than that of the control group. This difference highlights the added value of incorporating innovative media into guidance services. The use of puzzle media likely enhanced students' engagement and facilitated experiential learning, allowing them to internalize concepts related to bullying more effectively (Andriani et al., 2019; Ruliyatin & Ridhowati, 2021).

To further investigate the effectiveness of the intervention, an independent sample t-test was conducted to compare posttest scores between the experimental and control groups.

Table 3. Independent Sample t-Test Results

Variable	t-value	Sig. (2-tailed)
Posttest Scores	5.487	0.000

Table 3 shows that there was a statistically significant difference between the experimental and control groups in posttest scores, with a significance value of 0.000 ($p < 0.05$). This indicates that students who participated in group guidance services using anti-bullying puzzle media achieved significantly higher levels of bullying awareness compared to those who received conventional group guidance. This finding reinforces the argument that the integration of interactive media within guidance services can produce more effective learning outcomes. The puzzle-based approach not only delivers information but also engages students cognitively and emotionally, which is essential

for fostering awareness and behavioral change. Such findings are consistent with previous studies highlighting the effectiveness of game-based learning in enhancing social awareness and reducing problematic behaviors (Andriani et al., 2019; Ruliyatin & Ridhowati, 2021).

To assess the effectiveness of the intervention in terms of improvement magnitude, N-Gain analysis was conducted.

Table 4. N-Gain Score Analysis

Group	N-Gain Score	Category
Experimental Group	0.65	Moderate
Control Group	0.30	Low

Based on Table 4, the experimental group achieved an N-Gain score of 0.65, which falls into the moderate improvement category. In contrast, the control group obtained an N-Gain score of 0.30, categorized as low improvement. This result further confirms that the intervention using anti-bullying puzzle media was more effective in enhancing students' awareness compared to conventional methods. The moderate level of improvement in the experimental group suggests that while the intervention was effective, there is still room for optimization, such as increasing the duration or frequency of sessions.

The findings of this study demonstrate that group guidance services incorporating anti-bullying puzzle media significantly improve students' awareness of bullying behavior. This is evidenced by the substantial increase in posttest scores, significant statistical differences, and higher N-Gain values in the experimental group. From a theoretical perspective, these findings can be explained through experiential learning and social interaction frameworks. Group guidance provides a platform for students to engage in discussions, share experiences, and reflect on their behavior (Miftahul Jannah et al., 2024). When combined with puzzle media, the learning process becomes more interactive and meaningful, allowing students to actively construct their understanding of bullying concepts.

The use of puzzle media aligns with the principles of game-based learning, which emphasize active engagement, motivation, and cognitive involvement (Setyaningrum et al., 2018; Sugianto, 2023). Through puzzle activities, students are encouraged to analyze situations, identify forms of bullying, and understand their consequences, thereby enhancing their critical thinking and awareness. Although the control group also showed improvement, the magnitude was significantly lower. This suggests bahwa conventional group guidance, while beneficial, may lack the interactive elements necessary to fully engage students. As a result, the learning experience may be less impactful compared to approaches that incorporate innovative media. It is important to interpret these findings with caution. While the results indicate significant improvements, the study was conducted within a limited timeframe and involved a relatively small sample size. Additionally, external factors such as students' prior experiences and social environments may have influenced the outcomes

Conclusion

This study aimed to examine the effectiveness of group guidance services utilizing anti-bullying puzzle media in improving junior high school students' awareness of bullying behavior. The findings indicate that both the experimental and

control groups experienced significant improvements in bullying awareness. However, the increase observed in the experimental group was substantially higher, as reflected in greater posttest scores, significant statistical differences, and a higher N-Gain category. These results suggest that integrating anti-bullying puzzle media into group guidance services enhances the effectiveness of the intervention. The use of game-based media promotes active participation, cognitive engagement, and deeper understanding, which are essential in fostering students' awareness of bullying behavior (Setyaningrum et al., 2018; Sugianto, 2023). Moreover, within the group guidance context, such media facilitate interaction, reflection, and the development of social awareness (Miftahul Jannah et al., 2024).

This study contributes to addressing the research gap related to the limited use of educational game media in group guidance services, particularly in bullying prevention. Despite its positive findings, this study is limited by its small sample size and short intervention duration. Therefore, future research is recommended to involve broader samples and extended interventions.

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