

CONGDARDIR: AN INNOVATIVE TRADITIONAL GAME-BASED MEDIUM TO ENHANCE HIGH SCHOOL STUDENTS SELF-AWARENESS

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Abstract

This study aims to develop and examine the feasibility of a traditional game-based medium, derived from the game "congklak," named CONGDARDIR (Congklak Kesadaran Diri Congklak), as a tool in group counseling services to enhance high school students' self-awareness. The research employed a R&D method using the ADDIE model, consisting of five stages: analyze, design, develop, implement, evaluate. The medium was validated by subject matter experts, media experts, and users (school counselors), with feasibility percentages of 94%, 86%, and 93% respectively, categorizing it as "highly feasible." The final product consists of a congklak board, game seeds, and reflection cards designed based on self-awareness indicators. The trial was conducted with eight 11th-grade students selected through purposive sampling due to their low level of self-awareness. Scores averaged 88.13 (pretest) and increased to 136.13 (posttest). The Shapiro-Wilk normality test indicated normally distributed data. The homogeneity test yielded a significance value of 0.832 ($p > 0.05$), indicating homogeneous variance between pretest and posttest scores. The paired sample t-test revealed a significance value of 0.000 ($p < 0.05$), indicating a significant improvement following the intervention. Therefore, the CONGDARDIR medium has proven statistically and practically effective as a group counseling tool to enhance students' self-awareness through a fun, reflective, and culturally grounded approach. Counselors are encouraged to continuously utilize this medium in guidance services. Schools are also expected to support its use as part of student character development programs. Future researchers are recommended to further develop this medium and test its implementation in broader school contexts

Keywords: : *self awareness, group counseling, traditional games, congklak, guidance media.*

Introduction

Education plays a strategic role in shaping individual character and quality, as it provides opportunities for individuals to develop their potential optimally in order to achieve life goals (Yusuf, 2001). In formal education, schools are not merely institutions for transferring knowledge but also function as social spaces where students interact and learn about roles, responsibilities, and their positions in society (Chaplin, 2011). Healthy and meaningful social interactions in schools require students to have the ability to understand themselves well. In this regard, the level of self-awareness becomes a key

aspect in determining whether someone can appropriately position themselves in diverse social situations.

Self awareness refers to an individual's capacity to recognize, understand, and fully accept themselves, including in the context of social relationships with their environment (Tarigan et al., 2023). Goleman (in Sugiarto & Suhaili, 2022) states that someone with high self-awareness is capable of identifying their emotions, understanding their strengths and weaknesses, and making well considered decisions. Similarly, Akbar et al. (in Qowimah et al., 2021) emphasize that self awareness includes sensitivity to both internal and external conditions that influence individual behavior. This view is supported by Abdurrohman (in Esmiati et al., 2020), who explains that self awareness enables a person to understand their behavior and thought patterns thoroughly, allowing them to respond more reflectively and responsibly to various situations

Field observations show that self-awareness levels among students in several schools are still relatively low. As noted by Rahmadhani and Taufik (2024), 62.9% of high school students in West Sumatra displayed low self awareness, as reflected in their inability to read social situations and their lack of personal responsibility. A similar pattern was found at Senior High School 3 Kediri, where many students showed passive and indifferent attitudes during class. Behaviors such as using mobile phones during lessons, talking while the teacher is speaking, and copying answers from peers are examples of this. These conditions highlight the urgent need for effective interventions to improve student self-awareness.

To address this issue, group counseling services are a strategic alternative that school counselors can implement. Hartanti (2022) states that group counseling utilizes group dynamics as a medium to help students understand themselves and adapt to their environment. Through group interactions, students are encouraged to share experiences, reflect on their attitudes, and develop social skills. In this context, simulation games are considered effective as they create interactive learning environments and promote students' emotional engagement (Ramli in Sutirna, 2021). Games not only serve as entertainment but also act as natural media through which individuals express themselves, understand their environment, and build social and emotional skills (Setyaputri et al., 2019). Thus, this technique offers not only enjoyable learning experiences but also fosters reflective self awareness.

In addition to techniques, the effectiveness of guidance and counseling services is also greatly influenced by the media used. According to Nursalim (2013), the use of media in guidance and counseling can strengthen the messages delivered and help students understand their personal issues in a communicative and enjoyable way. Setyaputri and Hanggara (2022) stated that through play activities, students can learn various aspects of life such as social, cultural, economic, and cognitive aspects, which ultimately influence their personal development. In this context, traditional games such as *congklak* have great potential to be adapted as culturally based guidance and counseling media. In several regions of Indonesia, this game is known by different names, such as *dhakon*, *gaddong*, and *congkak*, each reflecting the richness of local culture (Anugrah & Makarohim, 2024). Lacksana (2017) explained that *congklak* is not merely an entertaining game, but also rich in educational and social values, such as cooperation, strategy, and precision. Furthermore, a study conducted by Fatimah et al. (2023) demonstrated that *congklak* can effectively improve students' cooperation skills when used in group guidance sessions. This finding reinforces the notion that traditional games can be modified into meaningful and relevant learning media.

Based on the above, the researcher developed an innovative medium in the form of a self awareness themed congklak game, called CONGDARDIR (Congklak Kesadaran Diri). This medium was specifically designed for use in group counseling services to

enhance students' self awareness through engaging and reflective gameplay. Incorporating elements of social interaction, personal reflection, and local cultural values, the CONGDARDIR game aims to create a holistic learning experience where students not only have fun but also are encouraged to gain deeper self-understanding.

Method

This study adopted a Research and Development (R&D) approach with the main objective of producing and testing a self awareness congklak based game (CONGDARDIR) as a tool in group counseling services for high school students. The development model used was ADDIE, an instructional design model that builds content or products based on performance (Soesilo & Munthe, 2020). The ADDIE model includes five systematic stages: Analyze, Design, Develop, Implement, and Evaluate. The choice of ADDIE was based on its logical and structured format, making it suitable for designing and developing media based educational tools.

In the analyze stage, the researcher conducted direct observations and interviews with school counselors at SMAN 3 Kediri and found that students demonstrated low self-awareness through behaviors such as using mobile phones during lessons, wearing earphones, and copying others' answers without personal reflection

The design stage involved creating the CONGDARDIR game, adapted from the traditional congklak into a group-based reflective game using question and challenge cards based on self awareness indicators. In the develop stage, the product was validated by subject matter experts, media experts, and school counselors using Likert scale assessment instruments, and revised based on feedback. In the implement stage, the game was trialed in a group counseling session with eight 11th Grade students selected through purposive sampling. The researcher served as the session facilitator. In the evaluation stage, students' self-awareness levels were measured before and after the intervention using a psychological scale developed and validated by the researcher. The scale was based on self-awareness indicators from Solso (2008), namely: attention, wakefulness, recall of knowledge, architecture, and emotive. The scale consisted of statements with four Likert-scale response options::

Table 1 *Likert Scale*

Category	Score
Always	4
Often	3
Sometimes	2
Never	1

Validity and Reliability Test

The validity test aimed to determine the extent to which the instrument could measure what it was intended to measure. Initially, the self-awareness psychological scale consisted of 56 items, and after validation, 45 items were deemed valid. The reliability test, which assesses the consistency of measurement results, produced a reliability score of 0.769.

Feasibility Test

Feasibility was assessed by media experts, material experts, and school counselor users. Feasibility was evaluated based on content, presentation, language, and visual appearance (Sugiyono, 2017). In guidance and counseling media, feasibility ensures that the tool is not only visually appealing but also psychologically meaningful and educationally appropriate.

The expert validation instrument used a 1–4 scoring scale, and feasibility was calculated using the following formula (Sugiyono in Susanto, 2024):

$$\text{Percentage} = \left(\frac{\text{Score Obtained} / \text{Maximum Score}}{\text{Maximum Score Total}} \right) \times 100\%$$

The interpretation categories according to Geor et al. (2024) in the journal Syntax Literate are as follows:

Table 2 *Interpretation Categories of Expert Validation Scores*

PRESENTAGE (%)	CATEGORY
81-100%	Highly Feasible
61-80%	Feasibility
41-60%	Fairly Feasible
21-40%	Not Feasible
≤20%	Very Poor Feasibility

Normality, Homogeneity, and t-Test

Quantitative analysis was applied to pretest and posttest data. The first step was the normality test, using the Shapiro-Wilk method (since $n < 50$), to assess whether the data followed a normal distribution (Ahadi & Zain, 2023). If the data met normality assumptions, the homogeneity test was conducted to check for equal variance across groups, followed by the paired sample t-test, a parametric test used to determine whether a statistically significant difference exists between two measurements (Sugiyono, 2017).

Overall, this method aimed to answer whether the CONGDARDIR game is theoretically and practically acceptable and whether it is effective in increasing students' self-awareness. The systematic development process, combined with validation and field testing, was intended to provide practical contributions to school counseling practices.

Result and Discussion

Based on the table 3, evaluations from the media expert, material expert, and counseling teacher categorized the media as "highly feasible for use."

Table 3 *Expert Validation Results*

Expert Evaluation	Percentage	Description
Media Expert	86%	Highly feasible for use, with the suggestion to add process evaluations in the guidebook for each counseling session.
Material Expert	94%	Highly feasible for use, with the recommendation to include a rubric in the guidebook.
Guidance and Counseling Teacher (User)	93%	Highly feasible for use, with a suggestion to replace the guidebook color with a brighter one.



Figure 1 *Back view of the CONGDARDIR game board*



Figure 2 Front view of the CONGDARDIR game board



Figure 3 Congklak seeds



Figure 4 CONGDARDIR game cards

Pretest and Posttest Results

After the development phase, a limited trial was conducted on a small group of 8 students identified as having low self-awareness. The pretest and posttest data are as follows:

Tabel 4 Data Pretest dan Posttest Self Awareness Siswa

Statistic	Pretest	Posttest	Category
Minimum Score	85	90	Low
Maximum Score	128	140	High
Average Score	88,13	136,13	

Based on the table, the pretest scores ranged from 85–90, categorized as low. After the intervention, the scores increased to 128–140. The average score increased from 88.13 to 136.13.

Normality, Homogeneity, and t-Test

To determine the data distribution, a normality test was performed with the following results:

Table 5 Normality Test Results

Data	Shapiro-Wilk	Keterangan
Pretest	0,203	Normal
Posttest	0,116	Normal

Based on the table above, both pretest and posttest data are normally distributed, allowing for further analysis with a homogeneity test (Paired Sample t-Test).

Table 6 Homogeneity Test Results

Data	Levene Statistic	Sig.
Pretest-Posttest	0,047	0,832

The Levene's Test significance value of 0.832 ($p > 0.05$) indicates that the variance between pretest and posttest data is homogeneous, allowing the analysis to proceed with the paired sample t-test)

Table 7 t-Test Results

Data	df	Sig.
Pretest-Posttest	7	0,000

The table shows a significance value of 0.000, meaning $p < 0.05$. This indicates a statistically significant difference between pretest and posttest self-awareness scores.

The results of a series of feasibility assessments, limited trials, and statistical analyses demonstrate that the CONGDARDIR media is highly feasible and effective as a counseling tool in schools. The validation tests show that the media achieved a feasibility percentage of 86% from the media expert, 94% from the material expert, and 93% from the school counselor, all of which fall into the "highly feasible" category. These findings indicate that the media meets content feasibility, presentation, visual aesthetics, and relevance to the goals of group counseling services. The validation process ensured that the media was systematically designed and met the real needs of students. This evaluation aligns with Sugiyono's (2013) criteria for educational product feasibility, which include clarity of content, visual appeal, and contextual relevance.

The limited trial conducted with 8 students with low self-awareness showed a significant increase in scores after participating in the counseling service using this media. The average pretest score of 88.13 increased to 136.13 on the posttest, indicating that the media successfully created a reflective and enjoyable learning experience. The game, designed to integrate social interaction, reflective questions, and personal challenges, proved effective in encouraging students to recognize, understand, and evaluate themselves more deeply. This supports Goleman's view (in Sugiarto & Suhaili, 2022) that self-awareness is a key foundation of emotional intelligence and can be developed through engaging personal experiences.

The normality test results showed that both pretest and posttest data were normally distributed (Shapiro-Wilk values > 0.05), which permitted further testing. The homogeneity test showed a significance value of 0.832, indicating homogeneous variance. The t-test (paired sample t-test) yielded a significance value of 0.000 ($p < 0.05$), confirming a statistically significant difference between pretest and posttest results. This leads to the conclusion that the CONGDARDIR intervention had a significant impact on enhancing students' self-awareness.

These findings are also supported by Arsyad (2017), who stated that an effective counseling medium should align with students' characteristics and learning objectives, while also fostering interest, active engagement, and deeper understanding. In the context of counseling, culturally rooted games like congklak serve not only as tools, but also as bridges between students' cognitive and affective development. The CONGDARDIR game has successfully combined these aspects into a reflective and meaningful learning experience.

These results align with the expectations established in the development phase, in which the game was designed to engage students cognitively and emotionally through reflective questions and group interaction. The findings also support relevant literature, such as Goleman's assertion (in Sugiarto & Suhaili, 2022) that self-awareness develops through emotionally engaging experiences. Setyaputri et al. (2019), who state that game-based activities significantly improve students' emotional engagement and understanding of themselves. The statistical results normality fulfilled, homogeneous variance, and a highly significant t-test result ($p = 0.000$) further confirm that the improvement is consistent and acceptable according to established psychometric and educational research standards.

This study also extends the findings of previous research. Fatimah & Sari (2023), for example, showed that congklak could increase students' cooperation skills in group guidance. The present study builds upon this by showing that a modified congklak game not only supports social interaction but also effectively enhances personal reflection and self-awareness. In line with Lacksana (2017), who emphasized the educational value of congklak, this study reinforces the idea that traditional games can be transformed into meaningful media for character development and counseling.

Although the results show strong evidence of the media's effectiveness, several alternative explanations should be considered. The increase in self-awareness may also have been influenced by students' enthusiasm for a culturally familiar game, the novelty of using a game-based medium in counseling, or heightened motivation due to the attention given during the intervention. The group dynamics within a small group of eight students may have allowed for more active participation and deeper reflection compared to larger groups. The facilitator's role may also have contributed to the outcomes, as effective guidance can enhance student engagement and reflective thinking.

The implications of these findings are substantial. Schools can consider integrating CONGDARDIR as an innovative and culturally relevant medium in group counseling services, especially in topics involving self-awareness, emotion management, and personal reflection. The study also highlights the value of incorporating local cultural elements into counseling media, thereby increasing students' sense of connection, participation, and engagement. This innovation supports the broader aim of character education in Indonesian schools and aligns with contemporary guidance and counseling practices that emphasize experiential and student-centered learning.

Despite its strengths, this study has several limitations. The small number of participants limits the generalizability of the findings. The study was also conducted in a single school, making it difficult to determine whether the increase in self-awareness will persist in the long term. Additionally, the facilitator's approach and brief interaction with the participants may have influenced the outcomes. Therefore, future research should control for facilitator effects and employ stronger longitudinal measurements.

Based on these limitations, further research is strongly recommended. Future studies should involve larger and more diverse samples across different schools to increase generalizability. Longitudinal studies would also be valuable to examine whether the improvements in self-awareness persist over time. Researchers are also encouraged to develop and test other thematic versions of CONGDARDIR for example, versions addressing emotional regulation, communication skills, or social responsibility. Such expansions would allow the medium to be applied more broadly in supporting students' personal and social development.

Conclusion

Based on the research findings, it can be concluded that the CONGDARDIR (Congklak Kesadaran Diri) game-based medium has proven to be highly feasible for use in group counseling services to enhance students' self-awareness. Validations from media experts, material experts, and users indicate a very high level of feasibility. This medium is not only visually appealing but also educational and aligned with students' psychological needs. Limited trials with students who had low self-awareness showed a significant increase in scores between the pretest and posttest, as evidenced by a t-test with statistically significant results. This demonstrates that the use of a reflectively modified traditional game can be an effective approach in school-based counseling practices. To enhance the effectiveness of guidance and counseling services, it is recommended that school counselors consistently utilize this medium as a supporting tool in carrying out their professional duties. Continuous utilization is expected to contribute positively to students' character development.

Furthermore, schools should provide adequate institutional support to ensure the optimal integration of this medium into character education programs. Such support may include the provision of facilities, training, and internal policies that encourage learning innovation. For further development, future researchers are encouraged to conduct more in-depth studies on the effectiveness of this medium, especially by applying it in more diverse and larger-scale school contexts, as well as for addressing other personal or social issues. This approach would allow for the generalization of findings and the refinement of the medium according to real needs in the educational field.

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Author Contributions Statement

All authors contributed significantly to the development of this research. SA formulated the main research idea, designed the development procedures using the ADDIE model, conducted data collection, and prepared the initial draft of the manuscript. NS and IP served as supervisors who provided conceptual and methodological guidance, contributed to data analysis, and reviewed and revised the manuscript to ensure scientific accuracy and coherence. All authors discussed the research findings, contributed to the interpretation of the results, and approved the final version of the manuscript for publication.

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