

Development of Ping Pong Relay Game Media for Counseling to Improve Students' Cooperation and Social Skills

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ABSTRACT

ARTICLE INFO

Article history:

Received

August 09, 2026

Revised

August 22, 2026

Accepted

August 24, 2026

This study aimed to develop the BK Pingpong Relay game as a group counseling medium to support the development of cooperation and social skills for eighth-grade students of VIII-4 at SMP Muhammadiyah 7 Medan. The research used the Research and Development (R&D) method with a 4D development model carried out through the Define, Design, and Develop stages. The research subjects included 26 students for the needs analysis and 10 students chosen through purposive sampling for limited testing. Data were collected through observation, interviews, and questionnaires, then analyzed descriptively using percentages for quantitative data and qualitatively through data reduction, data presentation, and drawing conclusions. The results showed that the needs analysis identified students' problems with cooperation and social skills as well as the need for interactive and group activity-based service media. The validation results from media experts received a 93% rating, categorized as very valid, while material expert validation got 85%, also categorized as very valid. The practicality test based on responses from Guidance and Counseling teachers scored 92%, categorized as very practical, and student responses scored 98%, also very practical. Thus, the BK Pingpong Relay game media is considered very valid and very practical as a supporting tool for group guidance services in developing students' cooperation and social skills. Future research is suggested to test the effectiveness of the media through an experimental design with a larger number of subjects.

Keywords: *Cooperation, Game Media, Group Guidance, Pingpong Relay Counseling, Social Skills.*

How to cite

Aulia, R., & Nasution, F. (2026). Development of Ping Pong Relay Game Media for Counseling to Improve Students' Cooperation and Social Skills. *Journal of Society Counseling*. 4(3). DOI: <https://doi.org/10.59388/josc.v4i3.1034>

Journal Homepage

<https://journal.scidacplus.com/index.php/josc>

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Published by

ScidacPlus

INTRODUCTION

Education is a process that not only aims to develop students' academic abilities but also shapes their personal and social skills needed in everyday life. Schools become an important environment for students to learn how to interact, build positive relationships, express opinions, respect differences, and work together to achieve common goals (Iskandar, Mesiono, & Sit, 2025). The ability to work together and social skills are important parts of student development because they relate to communication skills, adapting, building interpersonal relationships, and

participating positively in social environments (Wong & Meng-Lewis, 2023). Students in Grade VIII are in early adolescence, a phase where they have a strong need to interact with peers. However, in practice, there are still students who are not very active in communicating, tend to be passive in group activities, lack confidence in expressing their opinions, are not yet able to divide tasks evenly, and are less responsible for group assignments. This situation shows the need for systematic efforts to develop students' cooperation and social skills through activities that match their developmental characteristics.

Cooperation in this research is shown through several indicators, such as the ability to communicate, coordinate, share tasks and roles, take responsibility for duties, help each other, and respect the opinions and contributions of group members. Meanwhile, social skills include the ability to communicate effectively, interact positively, collaborate, respect others, control behavior and emotions in social situations, and solve problems constructively (Bandura, 1977; Postma et al., 2022). Both of these skills need to be developed at the same time because students who can work well with others and have good social skills will find it easier to build healthy relationships, adapt to the school environment, complete group tasks, and deal with differences in a positive way (Johnson & Johnson, 2005; Imai, Naruse, Kurita, Hiratani, & Tomori, 2023). Therefore, developing those skills is not enough just by delivering the material theoretically, but it requires hands-on experience that allows students to practice social behavior in active and meaningful activities.

In the implementation of Guidance and Counseling (GC) services, media is needed that can encourage active student involvement and provide direct social experiences. One alternative that can be used is GC games because games can create a more interactive, fun, and communicative service atmosphere. Through games, students get the chance to communicate, coordinate, make decisions, share roles, take responsibility, help each other, and respect others. One of the media developed in this study is the GC Pingpong Relay game, which is a group game that uses a pingpong ball in a series of relay activities (Hastuti & Tyas, 2021). The success of a game is not just determined by individual skills, but also by the ability of group members to play their roles and work together to achieve common goals.

The strategy for running the Pingpong Relay game is carried out in several steps: forming groups, explaining the goals and rules of the game, assigning roles, playing the game, reflecting, and evaluating. Each step focuses on indicators of student cooperation and social skills. Role assignments train responsibility, the relay process trains coordination and teamwork, communication between students develops interaction skills, while helping and respecting group members fosters social care. After the game, students are guided to reflect on the experiences they gained, such as ways of communicating, handling mistakes, helping friends, and resolving group problems (Anggeraja, Supriyanto, Suprihatin, & Sajidulloh, 2022). With that strategy, Pingpong Relay not only becomes a recreational activity, but also a guidance and counseling service medium that provides hands-on experience in developing students' social behavior.

Based on the explanation, developing the BK Relay Ping Pong game media is needed as one of the innovations in Guidance and Counseling services that integrates play activities with the development of student cooperation and social skills. The media being developed is expected to have clear objectives, indicators, rules, and implementation strategies so that it can be used practically by BK teachers in providing active services suited to students' characteristics. Through this game, students are expected to gain concrete experiences in developing communication, coordination, responsibility, helping each other, respecting others, and solving problems together.

Research on using games in Guidance and Counseling (GC) services shows that games can be an interesting way to develop students' social skills. (Neuvonen, Launonen, & Tetzchner, 2021) Developing a Snakes and Ladders game for social interaction and showing that the game can be used as a counseling tool to help students develop social interaction. Furthermore, (Wu et al. 2024) developed a dart board game media in group guidance services to improve students' social interaction, while (Arsa et al. 2026) used a maze board game in group guidance services and found an improvement in students' cooperation skills. Research (Karima & Lubis, 2026) also shows that card games based on cooperative learning can train social skills, especially communication and teamwork. These findings suggest that game media have the potential to be a tool for developing students' social abilities, but previous studies have tended to focus on just one aspect, like social interaction or cooperation, and often use board games, card games, or table games.

Based on previous research, there is a research gap because there hasn't been much development of guidance counseling (BK) game media that simultaneously integrates teamwork and social skills through simple and collaborative physical game activities, especially for middle school students. Moreover, there is still a need for media that directly connects the game mechanisms with the development indicators that are aimed to be achieved. In this study, teamwork focuses on communication, coordination, task and role distribution, responsibility, helping each other, and appreciating group members' contributions, while social skills include effective communication, positive interaction, cooperation, respect for others, self-control in social situations, and the ability to solve problems constructively. This gap shows the need for counseling media that is not only fun but also has developmental purposes, game rules, role division, group challenges, reflection, and evaluation designed systematically according to the indicators to be developed.

The novelty of this research lies in the development of the BK Relay Pingpong game media, which integrates group physical activities with the development of cooperation and social skills for eighth-grade students at SMP Muhammadiyah 7 Medan. The Relay Pingpong is designed not just as a recreational game, but as BK service media that has a game mechanism and strategies aimed at student development indicators. Through group formation, role distribution, relay execution, group challenges, reflection, and evaluation, students gain hands-on experience in communicating, coordinating, being responsible, helping each other, respecting peers, self-control, and solving problems together. Thus, the innovation of this study lies in a simple, collaborative, contextual, and structured physical game media that links play activities with cooperation and social skills indicators simultaneously within the BK service context for junior high school students.

METHOD

This research uses the Research and Development (R&D) method, which aims to create and develop BK Pingpong Relay game media to be used in group counseling services. The R&D method is suitable when the research is aimed at producing an educational product through a process of needs analysis, design, development, validation, revision, and product testing. The development model used is the 4D (Define, Design, Develop, Disseminate) model developed by Thiagarajan, Semmel, and Semmel. This model has a systematic process, starting from defining needs, designing the product, developing and validating it, to disseminating the product (Maryani, Martaningsih, Setyawan, & Desstya, 2026). Development research literature also shows that the 4D model is widely used in educational product development because the define, design, and

develop stages allow the product to be created based on user needs and then tested through expert assessment and development trials (Prayitno, Marjohan, Ifdil, Neviyarni, & Alizamar, 2017).

The research was carried out at SMP Muhammadiyah 7 Medan during the even semester of the 2025/2026 academic year. The research subjects consisted of 26 students from class VIII-4, and then 10 students were selected as trial subjects using purposive sampling based on the results of a needs analysis. The needs analysis was conducted through observation, semi-structured interviews with the guidance counselor, and distributing questionnaires to the students. The analysis results showed problems in cooperation and social skills, such as lack of participation in group activities, difficulty working together, low confidence in expressing opinions, and suboptimal social interaction with peers.

The development procedure is carried out through three main stages: Define, Design, and Develop. In the Define stage, the researcher identifies needs, student characteristics, problems in cooperation and social skills, as well as the need for counseling media. The Design stage involves determining the form of the game, rules, media components, service materials, and research instruments. Pingpong Relay Media is designed as a group game that encourages students to communicate, coordinate, share roles, take responsibility, help each other, and solve challenges together. Media components include pingpong balls, PVC pipes, collection cups, game tracks, challenge cards, reward cards, a mini spin wheel, a jigsaw puzzle, and a game guidebook. The Develop stage is carried out by creating the product, expert validation, revision, and limited trials with 10 students. Development up to the Develop stage is considered in line with the research focus aimed at producing a feasible and practical product, while the Disseminate stage has not been carried out yet. Conceptually, the define stage serves to identify needs, the design stage produces the initial design, and the develop stage includes expert assessment and product testing (Thiagarajan, Semmel, & Semmel, 1974).

Table 1. Stages of Developing the Ping Pong Relay Counseling Game Media

Stage	Research Activities	Product/Output
Define	Observation, interviews with Guidance and Counseling (BK) teachers, and student needs questionnaires	Identification of needs and problems
Design	Designing the format, rules, components, materials, and instruments	<i>Prototype</i> of the Estafet Pingpong media
Develop	Product development, expert validation, revision, and limited trials	Feasible and practical media
Disseminate	Not conducted in this study	The research was limited to the Develop stage

The research instruments included observations, interviews, student needs questionnaires, media expert validation sheets, material expert validation sheets, guidance counselor response questionnaires, and student response questionnaires. The data obtained consisted of qualitative and quantitative data. Qualitative data, such as observation results, interviews, and suggestions and feedback from validators, were analyzed through data reduction, data presentation, and drawing conclusions. Quantitative data, like validation scores and user responses, were analyzed using descriptive statistics in the form of percentages to determine the validity and practicality level of the media. Using validity and practicality assessments through expert instruments and user responses is also commonly used in educational media development research (Sugiyono, 2022). The percentage formula used is:

$$P = (F/N) \times 100\%$$

Description:

P = percentage of the assessment result;

F = score obtained;

N = maximum score.

The percentage results are then interpreted based on the criteria used in the study, which are 81–100% very valid/practical, 61–80% valid/practical, 41–60% fairly valid/practical, 21–40% not valid/practical, and 0–20% very invalid/impractical. With this procedure, the study is aimed at producing the BK Pingpong Relay game media that suits students' needs, has content and media feasibility, and is practical to use in group guidance services.

RESULTS AND DISCUSSION

Result

Student Needs Analysis

The needs analysis conducted on 26 students of class VIII-4 at SMP Muhammadiyah 7 Medan showed that there are still issues with students' teamwork abilities and social skills. Based on observations and interviews with the Guidance and Counseling (BK) teacher, it was found that some students are still not very active in group activities, have trouble communicating with peers, lack confidence in expressing their opinions, and tend to interact only with certain friendship groups. This situation shows that students' teamwork abilities and social skills still need to be strengthened through activities that allow them to interact directly and actively.

The results of the needs questionnaire showed that, out of 26 students, 10 were identified as experiencing problems related to cooperation and social skills. In terms of cooperation, the problems were reflected in students' ability to participate in groups, provide support to group members, respect their peers' opinions, solve problems collaboratively, and take responsibility for group tasks. In terms of social skills, some students still experienced difficulties in communicating positively, demonstrating empathy and concern, adapting to social situations, controlling their responses when disagreements occurred, and building positive relationships with peers.

The media needs analysis indicated that students required media that was interactive, involved group activities, encouraged communication among students, and provided an enjoyable learning experience. A total of 70% of students strongly agreed, and 30% agreed that interactive game-based media was needed to improve cooperation. Interest in games designed to develop cooperation and teamwork received responses of 50% strongly agree and 50% agree. Regarding social skills, 70% of students strongly agreed, and 10% agreed that interactive game-based media was needed, while 80% of students gave strongly agree and agree responses to activities involving social interaction and communication. These findings provided the basis for developing the Estafet Pingpong Guidance and Counseling Game as a medium for group guidance services.

Development of Ping-Pong Relay Counseling Media

Based on the results of the needs analysis, the BK Ping-Pong Relay game media was developed as a tool for group counseling services. The media is designed as a group game that requires students to communicate, coordinate, share roles, help each other, take responsibility, and complete tasks together. The product includes a game guidebook, pingpong balls, PVC pipes,

collection cups, tracks, challenge cards, reward cards, a mini spin wheel, and a jigsaw puzzle. Each component is designed in an integrated way to support student engagement and provide a hands-on experience in developing cooperation and social skills.

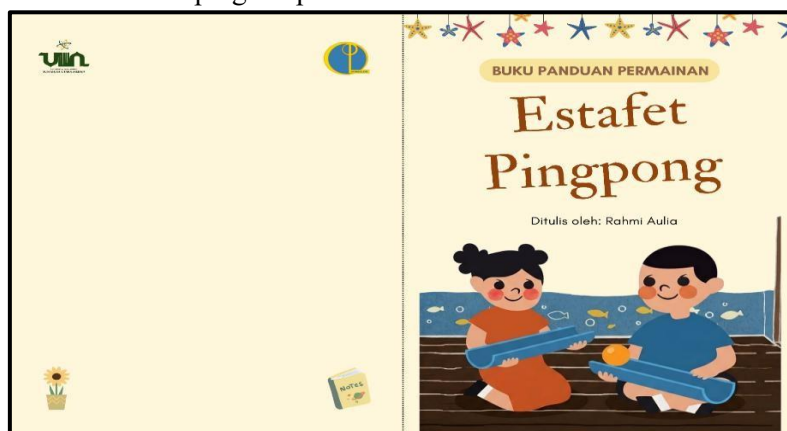


Figure 1. Game Guide Book

Source: Research documentation.

The guidebook contains the purpose of the game, user objectives, steps for implementation, game rules, group divisions, each member's role, indicators of cooperation and social skills, as well as procedures for carrying out group counseling services using the BK Pingpong Relay media. The existence of the guidebook is intended to help the guidance counselor carry out the game systematically and in line with the service objectives.



Figure 2. Pingpong Ball

Source: Research documentation.

The ping pong ball is the main object that is passed along in a relay by group members using a PVC pipe. This mechanism requires each member to play a role and be responsible for keeping the game going. The group's success is not only determined by individual skills but also depends on the contributions of all members.



Figure 3. PVC Pipe

Source: Research documentation.

PVC pipes are used as a tool to move ping pong balls from one group member to the next. Using the pipes requires students to arrange positions, give directions, communicate, and coordinate so that the ball can move without falling. This activity provides hands-on experience in practicing communication and teamwork among students.



Figure 4. Glass (Paper Cup)

Source: Research documentation.

A glass (paper cup) is used as a container for the ball in the game series. This component becomes part of the game mechanism that requires students to coordinate properly so that the ball can reach the predetermined goal.



Figure 5. Path Route

Source: Research documentation.

The track is used as part of the game arena that the pingpong ball must pass through in a relay. Setting up the track gives the group a challenge to maintain coordination and communication during the game.



Figure 6. Card Number Box

Source: Research documentation.

The card number box is used to place numbers related to challenge cards and reward cards. This component acts as a supporting part of the game to create a variety of activities and increase student engagement.



Figure 7. Challenge Card

Source: Research documentation.

Challenge cards contain questions or social situations that students have to answer after completing the game path. The cards give students a chance to discuss social situations, share their opinions, and practice positive social behavior.



Figure 8. Gift Card

Source: Research documentation

Gift cards are given as a form of appreciation to groups that show cooperation and positive social behavior during the game. The use of rewards is meant to reinforce cooperative behavior, helping each other, and positive interaction among students.

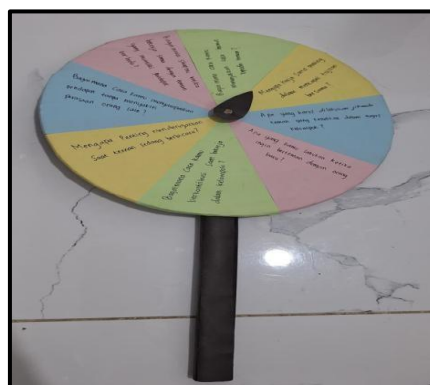


Figure 9. Mini Spin Wheel

Source: Research documentation.

A mini spin wheel is used to determine the type of track or activity that the group will do randomly. Using random elements in the game is meant to increase students' attention, readiness, and enthusiasm in participating in group activities.



Figure 10. Jigsaw Puzzle
Source: Research documentation.

Jigsaw puzzle used as a final project after the group completes all the paths and questions. Each completed path gives seven puzzle pieces, so after finishing four paths, the group gets 28 pieces that need to be put together into one complete shape. This activity requires students to discuss, share tasks, communicate, coordinate, and solve problems together.

Product Revision

After the media was finished being developed, the product was validated by media experts and subject matter experts. Based on the validation results, there were several suggestions that were used as a basis for improving the product. Improvements were made to the ball container component, pipes, track path, and the storage for challenge cards and reward cards. These revisions aimed to increase the appeal, neatness, and ease of use of the media before conducting practicality testing.

Table 2. Media Improvement Results

Validator Comment	Before Revision	After the Revision
Change the ball catcher paper so it looks better, you can add decorated ribbons		

Media Expert Validation

The media validation results conducted by Manna Wassalwa, M.Pd. showed that the BK Pingpong Relay game media scored 84 out of a maximum score of 90, with a percentage of 93%,

so it falls into the very valid category. The assessment covered aspects of media appearance, media writing, and media feasibility. For the appearance aspect, it scored 26 out of 30, the writing aspect scored 25 out of 25, while the media feasibility aspect scored 33 out of 35. These results indicate that the media has met the eligibility criteria in terms of visuals, language, and usefulness.

Table 3. Media Expert Validation Results

No.	Media Aspect	Score
1	Media Appearance	26/30
2	Media Writing	25/25
3	Media Feasibility	33/35
Total	Validator Score	84/90
Percentage		93%
Category		Highly Valid

The validation results show that the game's appearance is considered appealing and matches the characteristics of middle school students. The choice of colors, pipe layout, ping pong balls, and tracks are seen as neat and help engage the students. In terms of writing, the font type, size, and language used are clear and easy to understand. Meanwhile, the feasibility aspect shows that the usage instructions, reward cards, challenge cards, and game components have been integrated to support students' cooperation and social skills.

Content Expert Validation

The content expert validation was carried out by Dr. Ahmad Syarqawi, M.Pd. The assessment covered aspects such as content feasibility, material presentation, depth of material, and language. The validation result scored 68 out of a maximum of 80, with a percentage of 85%, which falls into the very valid category. These results show that the material in the media aligns with the development goals, namely supporting the improvement of students' teamwork and social skills through active and structured play activities.

Table 4. Results of Content Expert Validation

No.	Material Aspect	Score
1	Content Feasibility	17/20
2	Material Presentation	17/20
3	Material Depth	17/20
4	Language	17/20
Total	Validator Score	68/80
Percentage		85%
Category		Highly Valid

In terms of the depth of the material, the content is considered suitable for the development level of junior high school students and is able to help them understand the importance of teamwork and social skills in everyday life. The material also provides opportunities for students to work together, communicate, appreciate friends, help group members, and build positive social interactions. From a language perspective, the language used in the guidebook and media components is considered in line with Indonesian language rules, easy to understand, and does not cause multiple interpretations.

Practicality Based on the Responses of Guidance Counselors

After the media was declared valid by media experts and subject matter experts, a practicality test was carried out based on responses from the guidance counselors. The assessment included how well the game's objectives matched students' needs, ease of implementation, clarity of instructions, safety, the ability to train communication and coordination, responsibility, helping attitudes, and the usefulness of the media in improving cooperation and social skills.

Table 5. Results of the Practicality Test Assessment Based on the Responses of Guidance Counselors

No.	Statement Item	Rating
1	The objectives of the game are in accordance with the needs to improve students' cooperation and social skills.	5
2	The game is easy to implement in Guidance and Counseling (BK) services.	4
3	The game improves students' cooperation skills.	5
4	The game improves students' social skills.	5
5	The game instructions are clear and easy to understand.	5
6	The game is safe to use at school/in the classroom.	5
7	The game develops group communication and coordination skills.	5
8	The game develops responsibility and mutual support.	5
9	The game is beneficial for improving cooperation and social skills.	3
10	The game is recommended for future use.	4
Total	Validator Score	46/50
Percentage		92%
Category		Highly Practical

The guidance counselor's assessment got a score of 46 out of a maximum of 50, which is 92%, and falls into the 'very practical' category. This assessment shows that the media is easy to use in group guidance sessions and aligns well with the goals of developing teamwork and social skills. The counselor also gave high marks for clear instructions, media safety, the media's ability to train communication and coordination, as well as fostering responsibility and a helpful attitude.

Practicality Test Based on Student Responses

The next practicality test was carried out on 10 eighth-grade students of SMP Muhammadiyah 7 Medan, class VIII-4. The students participated in group guidance using the Pingpong Relay counseling game and then gave feedback on understanding the game's objectives, teamwork skills, communication, engagement, ability to follow rules, and the usefulness of the media.

Table 6. Results of the Practicality Test Assessment Based on Student Responses

Number of Respondents	Obtained Score	Maximum Score	Percentage	Criteria
10	490	500	98%	Highly Practical

The evaluation results showed that the media scored 490 out of a maximum score of 500, with a percentage of 98%, falling into the very practical category. This high percentage indicates

that students gave a very positive response to the developed media. The media is considered easy to understand, easy to use, engaging, and capable of providing an enjoyable experience.

The students' responses also showed that the game mechanism was able to encourage active participation from all group members. Each student had the chance to contribute according to their role, communicate, complete tasks together, and interact with group members. In addition, the clarity of the game rules and instructions was rated very well, so students could follow each stage of the activity without any significant difficulties.

Overall, the development results show that the BK Pingpong Relay game media received positive ratings in terms of validity and practicality. Media expert validation got 93% with a very valid category, material expert validation got 85% with a very valid category, BK teachers' responses were 92% with a very practical category, and students' responses were 98% with a very practical category. These results show that the media meets the feasibility aspects in terms of appearance, content, language, and usefulness, as well as the practicality aspects in terms of ease of use, attractiveness, engagement, and suitability for service needs.

Therefore, the BK Pingpong Relay game media can be used as one of the alternative tools in group guidance services to support the development of cooperation and social skills among students. The results of this study show that the product has gone through stages of needs analysis, design, development, validation, revision, and practicality testing. However, these results primarily indicate the feasibility and practicality of the product, so they cannot yet be used to statistically conclude the effectiveness of the media, as this study did not provide a pretest-posttest comparison or inferential testing on the improvement of students' cooperation and social skills.

Discussion

The needs analysis results show that the development of the BK Relay Pingpong game media is based on the real conditions of the eighth-grade 4 students at Muhammadiyah 7 Medan Junior High School. Out of 26 students analyzed, 10 students experienced problems in cooperation and social skills. These problems are seen in low participation in group activities, lack of ability to communicate with peers, low confidence in expressing opinions, limitations in supporting group members, lack of ability to respect others' opinions, and difficulty in building positive social relationships. These findings indicate that issues with cooperation and social skills are not only related to students' ability to complete tasks together but also include communication skills, empathy, self-adjustment, response control, and social problem-solving. These conditions are in line with research (Graf, Scholemann, Sykownik, Fuss, & Masuch, 2025), which found that low social skills in junior high school students can hinder interpersonal relationships and collaboration in the learning process. The study used cooperative game techniques in group guidance services and showed that games can be a relevant approach for developing social skills in junior high school students.

These identified needs are also supported by the results of the media needs analysis. About 70% of students said they strongly agree, and 30% agree, on the need for interactive game media to improve cooperation. Interest in games that train teamwork and togetherness also received responses of 50% strongly agree and 50% agree. In terms of social skills, most students gave positive responses regarding the need for game media that involves interaction and communication. This shows that students not only need material about cooperation and social skills but also need hands-on experiences to practice them. These findings are relevant to research (Wulandari & Rosdiana, 2024), which shows that cooperative games can create interactive learning and give students a stimulus to develop social skills through group activities. Therefore,

the need for Pingpong Relay media can be understood as both a pedagogical need and a counseling service need, because students require an activity environment that allows them to learn to communicate, coordinate, help each other, and solve problems in a real way.

The characteristics of the Pingpong Relay media offer advantages because the game doesn't just place students as passive recipients of information, but as the main actors in social activities. The pingpong ball that has to be moved through a PVC pipe requires group members to coordinate and communicate so the ball can move without falling. Each member has interdependent roles, so the success of the game can't be achieved by just one student. This pattern is relevant to the concept of cooperative learning, which emphasizes positive interdependence, individual accountability, promotive interaction, and social skills. Empirically, research (Mwinsa & Dagada, 2025) shows that the traditional chopstick game in group guidance can be used to develop teamwork skills because the game's activities require physical skills, concentration, and cooperation among participants. Another finding from (Chen, 2021) It also shows that the game Gobak Sodor can improve middle school students' cooperation skills, including communication, coordination, discussion, helping friends, and group responsibility. The similarity strengthens the argument that games where an individual's success depends on group members can be a concrete way to practice cooperative behavior.

Besides the relay mechanism, the developed media has challenge cards that contain questions or social situations. This component provides space for students to express opinions, discuss, understand social situations, and find appropriate responses to interpersonal problems. These characteristics are similar to previous research. (Bali, Rosida, & Gunawan, 2025) which develops educational games for social skills to help students consider alternative problem-solving options and reach consensus when facing disagreements. The research shows that games can be used to help students understand the importance of considering alternative solutions in resolving social conflicts. Therefore, challenge cards in Pingpong Relay have a broader function than just adding variety to the game, as they can serve as a bridge from physical activities to reflective processes and social problem-solving.

Using a jigsaw puzzle as the final part of the game also contributes to the collaborative nature of the media. After completing the course, students have to put the puzzle pieces together into a complete shape. This activity requires task division, communication, coordination, decision-making, and problem-solving together. This mechanism shows that Pingpong Relay not only develops teamwork in one activity but also integrates several social experiences into a single game series. This is in line with research (Sokhanvar, Salehi, & Sokhanvar, 2021) which found that the game Make & Match can improve social skills of junior high school students, especially communication, teamwork, empathy, self-control, and the ability to resolve conflicts constructively. The study used a pretest-posttest design and found a significant increase in social skill scores. This similarity shows that games with interaction structures and collaborative tasks have the potential to provide more meaningful social experiences compared to activities that are purely individual.

From the product feasibility side, the media expert validation got a score of 84 out of 90, or 93%, which falls into the 'very valid' category, while the material expert validation scored 68 out of 80, or 85%, also 'very valid'. These high scores show that the media has met aspects like appearance, writing, feasibility, content, presentation, material depth, and language. This result is important because guidance and counseling game media not only need to be visually appealing, but also have to match the game format, content, service goals, student characteristics, safety, and ease of use. In this study, the guidebook is also an important component as it includes the

objectives, target users, game rules, group division, member roles, indicators of cooperation and social skills, as well as the procedures for conducting group guidance services.

The validation results can be compared with previous research on the development of BK game media. The research (Nahar, Suhendri, Zailani, & Hardivizon, 2022) developed a word arrangement game based on groups in classroom guidance services to train student cooperation. The study also considers needs analysis, game design, feasibility, and practicality as important parts of the media development process. Meanwhile, Darmawan's research on social interaction snakes and ladders games and Husniyah and Pratiwi's research on social interaction dartboard games show that games can be developed as guidance media that support student social interaction. While those studies use board games or target games, Ping Pong Relay offers a type of game that emphasizes physical activity, motor coordination, member dependence, and direct communication. This difference strengthens Ping Pong Relay's position as an alternative medium with its own unique characteristics in group guidance services.

In terms of practicality, the school counselor's response scored 46 out of 50, or 92%, in the very practical category, while the responses from 10 students scored 490 out of 500, or 98%, also in the very practical category. These results show that the media can be applied relatively easily in counseling services and is positively received by users. The school counselor gave high ratings for the suitability of the objectives, clarity of instructions, safety, ability to train communication and coordination, responsibility, and helpful attitudes. Meanwhile, the very high student responses indicate that the game is considered interesting, easy to understand, and capable of providing an enjoyable service experience. These findings are in line with previous research. (González, Merino, Ardigò, & Goth, 2025) about the labyrinth board game in group guidance services, which shows that group-based games can be used to support the improvement of students' cooperation skills. This shows that the aspects of attractiveness and ease of use are important parts of the successful implementation of game media in guidance services.

The high response from students can also be explained by the characteristics of the game, which gives every group member a chance to participate. Students don't just wait for instructions from the school counselor, but have to move, communicate, follow the rules, coordinate actions with friends, and complete challenges together. This situation aligns with the principle that social skills are easier to develop when students get the chance to practice social behaviors in meaningful interaction contexts. Research (Noperiyanti & Hasibuan, 2025) shows that a game-based cooperative learning model can be used to develop social skills in junior high school students, with indicators including socializing ability, confident interaction, caring, task completion, respect for opinions, emotional control, and friendliness. These indicators are closely related to the aspects aimed to be developed through Pingpong Relay, especially communication, responsibility, respect for others, self-control, and teamwork.

From the perspective of Guidance and Counseling services, this study's findings show that games can function as a medium for experience, not just as a tool for delivering material. Guidance counselors can use games as structured situations to observe how students communicate, take on roles, deal with mistakes, offer help, accept opinions, and solve problems together. In this way, games provide two benefits at once: creating an enjoyable service atmosphere and giving counselors a context to develop students' social behaviors. The study (Agustina & Muslikah, 2026) supports that perspective by showing that cooperative games integrated into group guidance can be used to develop middle school students' social skills. Research (Teng & Gordon, 2021) also found that the educational game Make & Match in group

guidance services can improve students' social skills, although the study used a limited sample, so its generalization should be done carefully.

Overall, the research findings show a consistency between students' needs, media design, validation results, and user responses. Students' needs indicate the necessity for interactive and collaborative media; the Pingpong Relay design then translates these needs through relay activities, challenge cards, mini spin wheels, rewards, and jigsaw puzzles; expert validation shows a very high feasibility level; while guidance counselors and students give very practical responses. This pattern shows that the developed media fits well with the needs, product characteristics, and its use in guidance services. The novelty of the Pingpong Relay mainly lies in combining physical activities and group coordination with social situation discussions, reinforcement, random game elements, and puzzle solving in a single group guidance media.

Nevertheless, the interpretation of the research results needs to be done proportionally. The percentages of 93% in media expert validation, 85% in material expert validation, 92% in the school counselor teacher responses, and 98% in student responses prove that the product is very valid and very practical, but it does not yet statistically prove that the media has improved students' cooperation and social skills. The research documents themselves show that there has been no pretest-posttest comparison or inferential testing on changes in students' abilities. This is different from some recent experimental studies, such as (Suratmin, Darmayasa, Womsiwor, Surath, & Liskustyowati 2025), which used a pretest-posttest and found a significant difference in social skills after the Make & Match game, as well as research (Neuvonen, Launonen, Smith, Stadskleiv, & Tetzchner, 2021) which found an increase in cooperation after playing Gobak Sodor through a one-group pretest-posttest design. Therefore, the scientific position of this research is more appropriately stated as developing a media that is very valid and very practical and has the potential to support the development of cooperation and social skills, while proving effectiveness or improvement in ability empirically still requires further research using an experimental or pretest-posttest design.

Thus, this study contributes to the development of counseling media by introducing a Pingpong Relay game as a group-based activity that combines physical, cognitive, communication, and social aspects. The media not only guides students to complete the game but also creates a series of experiences that require communication, coordination, role-sharing, responsibility, care, appreciation for others, and problem-solving. These findings expand on previous research that has shown the benefits of games in developing cooperation and social skills by offering a more structured and contextual form of play for middle school students. With a very high level of validity and practicality, the Ping Pong Relay media can be considered as one of the alternative media in group counseling services, especially to create more active, participatory counseling services that match the social development characteristics of students.

CONCLUSION

Based on the research results, the BK Pingpong Relay game media was successfully developed based on the needs of eighth-grade students of SMP Muhammadiyah 7 Medan to support cooperation and social skills. The media received a media expert validation score of 93% and a material expert score of 85%, while the counselor response reached 92% and the student response was 98%, all falling into the very valid and very practical category. This media serves as an alternative for group counseling services that are more active, interactive, and fun through activities like communication, coordination, role distribution, responsibility, helping each other, and problem-solving. However, the study has limitations in that it only involved 10 student

participants, the development has not yet reached the Disseminate stage, and there is no pretest-posttest design, so the results cannot yet statistically prove an improvement in abilities. Therefore, future research is suggested to involve a larger group of participants, use an experimental or pretest-posttest design to test the effectiveness of the media, and develop variations of games, challenge cards, courses, and the possible integration of digital media without eliminating elements of interaction and cooperation among students.

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