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Implementation of Traditional Games in the Healthy School Movement (GSS) Program to Improve Physical Health at State Elementary School 2 Muara Dua Lhokseumawe City

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A B S T R A C T

The decline in physical activity among elementary school students has become a growing concern due to sedentary lifestyles and limited movement-based learning activities. In response, the Healthy School Movement Program encourages schools to promote students' physical health through structured physical activities. This study aims to analyze the implementation of traditional games within the GSS Program to improve students' physical health at State Elementary School 2 Muara Dua, Lhokseumawe City. A descriptive qualitative case study approach was employed. Data were collected through observations, in-depth interviews, and documentation involving the principal, teachers, and students, and were analyzed thematically using NVivo software. The findings reveal that traditional games such as gobak sodor and engklek effectively enhance students' physical fitness, endurance, and activity levels. Supporting factors include strong teacher involvement, high student enthusiasm, and the availability of open spaces, while constraints consist of limited facilities, time constraints, and weather conditions. These challenges were addressed through flexible scheduling and adaptive use of school spaces. In conclusion, the integration of traditional games within the GSS Program is an effective and enjoyable strategy for improving physical health while simultaneously fostering character development and social interaction, thereby supporting a holistic healthy school environment rooted in local cultural values.

1. Introduction

Basic education plays a fundamental role in shaping students' character and establishing healthy lifestyle habits from an early age. However, recent data indicate that the physical health of children remains a serious concern, both globally and nationally. The World Health Organization (Organization, 2001) reported that

approximately 81% of children and adolescents worldwide fail to meet the recommended daily physical activity levels, while the global prevalence of childhood obesity has reached 18%. In Indonesia, the prevalence of obesity among children has increased sharply from 3.9% to 15.4% over the past two decades (Mulyadi, 2015; Oktaviani et al., 2023). This alarming trend is closely associated with sedentary lifestyles, excessive screen time, and the dominance of technology-based activities that reduce opportunities for physical movement, particularly among elementary school-aged children.

In response to these challenges, the Indonesian government introduced the Healthy School Movement (GSS) through the Ministry of Education, Culture, Research, and Technology as a strategic initiative to improve students' overall health. The GSS program evolved from the "3 Healthy" concept into the "5 Healthy" framework, encompassing Healthy Nutrition, Healthy Physical Health, Healthy Immunization, Healthy Mental Health, and a Healthy Environment. Schools play a crucial role in implementing this program by creating learning environments that promote healthy habits through enjoyable, meaningful, and educational activities. Within this context, traditional games emerge as a simple, low-cost, and culturally rooted alternative to support the Physical Health component of the GSS program.

Traditional games such as gobak sodor, engklek, jump rope, and tug-of-war involve dynamic movements that require running, jumping, balancing, and teamwork. These activities not only improve physical fitness but also foster social skills such as cooperation, sportsmanship, communication, and emotional regulation. From a theoretical perspective, this approach aligns with Bronfenbrenner ecological theory of human development, which emphasizes the importance of interactions between individuals, their environment, and cultural contexts in shaping children's growth and behavior. Through school-based traditional games, children experience meaningful interactions within the microsystem (school environment) while simultaneously engaging with cultural values embedded in the macrosystem.

Traditional games also represent an important form of local wisdom passed down through generations. Hadi (2019) explains that traditional games are not merely recreational activities but cultural practices rich in moral and social values. Similarly, Rachmawati & Wulandari (2020) argues that games such as congklak, stilts, pet-pet pong, engklek, and tarek situek function as informal learning tools that develop children's motor skills, creativity, cooperation, and problem-solving abilities. In the era of digital dominance, where children increasingly prefer gadget-based entertainment, traditional games have the potential to revive social interaction, physical engagement, and a sense of togetherness that has gradually diminished.

From a physical health perspective, traditional games significantly contribute to children's fitness. Activities involving jumping, running, pulling, and balancing improve muscle strength, motor coordination, endurance, agility, and flexibility. M. Fajar (2020) emphasizes that physical health is reflected in a body that functions optimally and is achieved through regular physical activity, balanced nutrition, and healthy lifestyle practices. In elementary education, indicators of physical

healthsuch as stamina, balance, agility, and coordination can be effectively developed through traditional games conducted in a structured school environment. The Healthy School Movement (GSS) provides a strategic platform for integrating traditional games into elementary school activities. According to Supriyanto (2019), GSS encourages schools to design learning experiences that increase students' physical activity while simultaneously supporting mental and environmental health. In this regard, traditional games are particularly effective because they combine physical exercise with character education. Values such as discipline, fairness, teamwork, and social responsibility are naturally embedded in the rules and interactions of these games, making them highly relevant to holistic education goals.

At the same time, recent educational research published in the Journal of Educational Sciences (JES) highlights the rapid development of technology-based learning innovations, particularly through augmented reality (AR) and digital modules. Studies by Khusnunnisa & Andriani (2025), Septiani et al. (2025), and Zahro et al. (2024) demonstrate that AR-based multimedia can enhance students' motivation, conceptual understanding, and engagement in various subjects. Similarly, research on e-modules and interactive digital learning media shows positive impacts on cognitive outcomes, literacy, and independent learning (Bungin, 2007; Imran et al., 2025; Maisaroh et al., 2025). While these innovations are valuable for improving learning quality, they also indirectly contribute to increased screen time and reduced physical movement if not balanced with active learning strategies.

This condition underscores the importance of maintaining equilibrium between digital innovation and physical activity in schools. While AR and digital modules are effective for visualizing abstract concepts and enhancing academic achievement, they cannot replace the essential role of physical movement in children's development. Therefore, traditional games serve as a necessary counterbalance, ensuring that students' physical health is not neglected amid the rapid integration of educational technology. In this sense, traditional games complement digital learning by addressing aspects of physical and social development that technology-based media often overlook.

Furthermore, the integration of traditional games within the GSS program aligns strongly with Bronfenbrenner (1979) ecological systems theory. This theory explains that child development is influenced by multiple interacting systems, including the microsystem (school and family), mesosystem (relationships between environments), exosystem (institutional and policy contexts), macrosystem (culture and values), and chronosystem (changes over time). In this study, traditional games function as cultural elements within the macrosystem that shape healthy behaviors through the school microsystem, supported by national health and education policies.

Empirical studies further support the effectiveness of traditional games in improving children's physical and mental health. Sari et al. (2019) found that activities such as tug-of-war, jump rope, and gobak sodor significantly improve

physical fitness and gross motor skills while fostering teamwork. Budiarjo & Fauzi (2018) emphasized that school-based physical activities reduce obesity risk, improve sleep quality, and strengthen endurance. Additionally, Rahayu (2020) reported that traditional games help reduce stress and anxiety while enhancing social interaction and emotional development. Zulfa & Nuraini (2022) also highlighted the success of integrating traditional games within the GSS framework to increase students' physical activity and strengthen local cultural values.

Based on these theoretical and empirical considerations, traditional games serve not only as entertainment but also as a holistic health education tool. Through an ecological and culturally responsive approach, interactions between students, teachers, school environments, and local traditions create positive synergy in promoting children's physical health. Therefore, this study aims to analyze the effectiveness of implementing traditional games within the Healthy School Movement (GSS) program to improve students' physical health at SD Negeri 2 Muara Dua, Lhokseumawe City, as well as to identify supporting factors and obstacles in its implementation. The findings are expected to contribute practical recommendations for strengthening sustainable, culture-based health programs in elementary schools.

2. Methodology

Instruments

The primary research instrument in this qualitative study was the researcher, who played a central role in planning, collecting, and interpreting the data. To support data collection, semi-structured interview guidelines were developed to explore participants' perceptions, experiences, and views regarding the implementation of traditional games within the Healthy School Movement (GSS) Program. The interview questions focused on the objectives of the program, types of traditional games applied, perceived physical health benefits, and challenges encountered during implementation. Observation sheets were designed to systematically record students' physical activities, movement intensity, participation levels, interaction patterns, and adherence to game rules. These observation instruments allowed the researcher to capture real-time conditions during traditional game sessions conducted at school. Documentation instruments were also prepared in the form of checklists to collect written and visual data relevant to the study. The documents analyzed included lesson plans (RPP), school activity schedules, GSS implementation guidelines, and government policy documents related to school health. All instruments were reviewed and refined prior to data collection to ensure clarity, relevance, and alignment with the research objectives.

Data Collection

Data collection was conducted over a one-month period at State Elementary School 2 Muara Dua, Lhokseumawe City, under natural school conditions. In-depth interviews were carried out with the school principal, classroom teachers, physical

education teachers, and selected students from grades III to V who actively participated in traditional game activities. The interviews were conducted face-to-face using semi-structured guidelines to allow participants to express their experiences and opinions freely. Direct observations were conducted during the implementation of traditional games such as *gobak sodor* and *engklek* to examine students' physical engagement, cooperation, and enthusiasm. The researcher observed multiple sessions to ensure consistency of findings across time. Documentation was collected concurrently to support and verify data obtained from interviews and observations. Triangulation of data sources, techniques, and time was applied to enhance the credibility and trustworthiness of the findings. This systematic data collection process ensured that the research captured a comprehensive picture of the implementation of traditional games within the GSS Program.

Data Analysis

Data analysis was carried out simultaneously with the data collection process to allow continuous reflection and refinement of emerging findings. All interview recordings were transcribed verbatim, while observation notes and documentation were organized systematically. The data were then imported into NVivo software to facilitate efficient data management and analysis. Initial coding was conducted to identify meaningful units of information related to physical health improvement, implementation strategies, supporting factors, and obstacles. These codes were then grouped into broader categories and themes through a thematic analysis approach. Data reduction was applied by selecting relevant information and eliminating redundant or irrelevant data. The results of the analysis were presented in narrative and thematic forms to clearly illustrate research patterns and relationships. Finally, conclusions were drawn based on the consistency of themes across data sources, ensuring that the findings accurately reflected the research objectives and field conditions.

3. Results and Discussion

Muara Dua 2 Public Elementary School is an elementary school under the auspices of the Lhokseumawe City Education Office, Aceh Province. The school is located on Jl. Haji Nafi, Gampong Meunasah Mesjid, Muara Dua District, a densely populated area with good transportation access. Its strategic location makes it easily accessible to students from various socioeconomic backgrounds. SD Negeri 2 Muara Dua was established in 2019 based on the Decree of the Head of the Lhokseumawe City Education Office Number 640/159/2019. Although relatively new, this school has shown rapid development in terms of educational quality, participation in national programs, and student character development. This school has been accredited with an "A" predicate by the National Accreditation Board for Schools/Madrasahs (BAN-S/M) based on Decree Number 1347/BAN-SM/SK/2021. The number of students currently reaches 409 students, consisting of 211 male students and 198 female students. The learning process is guided by 29

teaching and administrative staff who have appropriate educational backgrounds and adequate professional competencies.

The informants in this study were 1 Principal Mrs. Eka Syafrida, S.Pd., M.Pd, 1 Physical Education Teacher namely Mr. Zulfikar, S.Pd, 1 Class Teacher namely Mrs. Nurul Fitriani, S.Pd and finally the Informant Students who were randomly selected from Class III to Class V with the criteria of actively participating in traditional game activities and being able to provide opinions verbally. There were 6 student informants with 3 males and 3 females who acted as sources of information regarding direct experience and perceptions of physical activities at school. Then the research was carried out for approximately 1 month, namely in September 2025.

In this study, the traditional games implemented in the Healthy School Movement (GSS) program include gobak sodor, engklek, tug of war, bentengan, and jump rope. Each game was selected based on its ability to stimulate students' physical activity, coordination, and teamwork. Gobak sodor emphasizes agility and strategy through team-based movement across guarded lines. Engklek (hopscotch) focuses on balance and motor coordination through single-leg jumping patterns. Tug of war develops muscle strength and endurance, while bentengan trains speed, teamwork, and tactical thinking. Jump rope enhances cardiovascular endurance and rhythmic coordination. These games are simple, culturally relevant, and require minimal equipment, making them suitable for elementary school settings.

The implementation of these games follows structured stages integrated into school activities. Initially, teachers provide instructions and demonstrations of game rules. Students are then divided into groups to encourage participation and cooperation. The games are conducted during physical education (PJOK) sessions or scheduled GSS activities on a weekly basis. Teachers act as facilitators and supervisors, ensuring safety, fairness, and active engagement. Evaluation is conducted informally through observation of students' participation, endurance, and behavioral changes. This structured yet flexible implementation allows traditional games to function as both physical exercise and character-building activities. This structured yet flexible implementation allows traditional games to function as both physical exercise and character-building activities. Examples of the implementation of traditional games in school activities can be seen in Figure 1 and Figure 2.

Research result

Interview Results

Before presenting the interview results, it is important to describe the interview procedure used in this study. The interviews were conducted using a semi-structured approach, allowing flexibility while maintaining focus on the research objectives. The researcher prepared a set of guiding questions related to the implementation of traditional games, physical health improvement, supporting factors, constraints, and perceptions of teachers and students. Interviews were carried out face-to-face in a conducive environment within the school, such as the

principal's office, classrooms, and schoolyard. Each interview lasted approximately 30–60 minutes and was documented through note-taking and audio recording with the participants' consent.

Figure 1. Traditional Game Activity: Engklek

Figure 2. Traditional Game Activity: Egrang

The semi-structured format enabled the researcher to explore deeper insights by asking follow-up questions based on participants' responses. This approach ensured rich, detailed, and contextually relevant data regarding the implementation of traditional games in the GSS program. Interview analysis results indicate that the implementation of traditional games in the Healthy School Movement (GSS) Program has had a positive impact on improving the physical health of students at SDN 2 Muara Dua. The principal, physical education teacher, and class teachers stated that the children became more active, fit, and rarely complained of illness. Game activities such as gobak sodor, tug of war, hopscotch, fort, and jump rope were considered effective in developing stamina, agility, strength, and balance. Students also reported feeling more refreshed, less tired, and more focused in their

lessons. This indicates that traditional games play a significant role in developing healthy lifestyle habits and increasing students' enthusiasm for learning. The main interview questions used to guide the data collection are presented in Table 1 below.

Table 1. Interview Question Guidelines

No	Interview Aspect	Questions
1	Physical Health Improvement	How does the implementation of traditional games affect students' physical fitness?
2	Types of Games	What traditional games are most effective in improving physical health?
3	Implementation	How are traditional games implemented in the GSS program?
4	Supporting Factors	What factors support the success of the program?
5	Constraints	What challenges are faced during implementation?
6	Teacher Perception	How do teachers perceive the benefits of traditional games?
7	Student Perception	How do students feel about participating in traditional games?
8	Impact on Learning	Do traditional games influence students' motivation and concentration?

These findings reinforce educational studies published in the *Journal of Educational Sciences*, which emphasize that engaging and meaningful learning activities significantly improve student motivation and learning readiness (Haryati, 2016; Khusnunnisa & Andriani, 2025; Zahro et al., 2024). Although previous JES studies mainly focus on the effectiveness of augmented reality (AR) and digital media in enhancing cognitive outcomes, the present study demonstrates that physical-based activities grounded in local culture also play a critical role in supporting students' learning engagement and well-being.

Beyond physical health, interview results revealed that traditional games contribute to character development and social interaction. Teachers observed improvements in cooperation, sportsmanship, discipline, and self-confidence among students. Students also reported stronger peer relationships and increased enjoyment of school activities. These findings align with JES research indicating that interactive learning environments whether technology-based or activity-based support students' affective and social development (Hermawan & Putri, 2017; Jannah et al., 2025; Muti'ah et al., 2024). Several supporting factors contributed to successful implementation, including strong support from the principal and teachers, high student enthusiasm, parental approval, and the availability of open spaces for play. Similar findings are reported in JES studies highlighting the importance of institutional support and learning environment readiness in ensuring program effectiveness (Notoatmodjo, 2007; Sudarno et al., 2025; Syahrir et al., 2025). However, challenges such as limited time due to academic schedules, weather conditions, and restricted facilities were also identified. These constraints were addressed through flexible scheduling and adaptive use of available spaces.

In addition to the physical benefits, interviews also revealed that traditional games contribute to strengthening students' character and social interactions. Teachers assessed that these activities foster values such as cooperation, sportsmanship, and

discipline, while students experienced increased self-confidence and camaraderie with their peers. Traditional games also serve as a fun, contextual learning medium, as they incorporate elements of local culture and physical activities relevant to everyday life. Thus, these activities are not only oriented towards physical health but also support children's social and emotional development.

Key factors contributing to the program's successful implementation include teacher and principal support, student enthusiasm, and the availability of facilities such as open fields. Active teacher participation in mentoring students also boosted their enthusiasm for participation. Parents provided moral support by allowing their children to participate actively in these activities, while regular scheduling by the school helped maintain the program's sustainability. However, several challenges persisted, such as time constraints due to busy academic schedules, unpredictable weather conditions, and limited play facilities.

Despite these challenges, the school successfully overcame them through creativity, such as adjusting schedules and using simple tools. Students also expressed positive perceptions of traditional games, feeling happier, healthier, and more motivated to attend school. They also viewed these activities as enjoyable activities that fostered social connections and reduced learning stress. Overall, interview results indicated that the integration of traditional games into the Healthy School Movement Program not only improved physical fitness but also strengthened cultural values, character, and fostered a healthy and positive learning climate within the elementary school environment.

Observation Results

Observational data further confirmed the effectiveness of traditional games in promoting physical activity and positive behavior. Teachers actively facilitated and motivated students during activities, demonstrating strong commitment to health and character education. This active teacher involvement reflects findings from JES studies emphasizing the crucial role of educators in optimizing learning media and activities, whether digital or non-digital (Rahayu, 2020; Rukmini & Rismayani, 2014; Sudarno et al., 2025). Students showed high levels of physical engagement, endurance, and enthusiasm during games such as *gobak sodor* and *bentengan*. They participated actively without excessive fatigue, indicating improved physical fitness. Socially, students demonstrated fair play, cooperation, and increased discipline in following rules. Minor emotional responses, such as disappointment after losing, were observed but served as learning moments for emotional regulation and sportsmanship. These observations support JES findings that experiential learning activities contribute positively to students' behavioral and emotional development (Masrukhin et al., 2024).

Observational analysis of the implementation of traditional games within the Healthy School Movement (GSS) program demonstrated strong teacher and student involvement, as well as a conducive school environment. Physical Education (PJOK) teachers and classroom teachers actively assisted and motivated students throughout the activity. Teacher support was evident not only in their physical

presence but also in their positive attitudes toward the character and health values embedded in the traditional games. Teachers recognized that these activities contributed to building a sense of togetherness and discipline among students. Furthermore, they viewed these activities as a fun and healthy educational tool.

Environmentally, the school is able to maximize the use of existing facilities and infrastructure. The open field serves as the main activity center, while areas such as the school terrace serve as alternatives during unfavorable weather conditions. This flexibility demonstrates the school's strong adaptation to optimize activity implementation. However, weather and time constraints pose major challenges. Rain and extreme heat often hinder activities, while the busy academic schedule requires careful planning of playtime to avoid disruptions to the teaching and learning process.

Meanwhile, student observations revealed significant improvements in physical fitness and motivation. Students were able to actively participate with high levels of movement without showing excessive fatigue. Games such as Gobak Sodor and Bentengan encouraged students to run, jump, and collaborate, thus increasing their endurance. Socially, students demonstrated high enthusiasm and equitable participation, including among those who were typically passive. Interactions between students became more harmonious, and discipline in following game rules increased. Although minor behavioral challenges, such as disappointment after losing, emerged, these became part of the positive character-building process within the context of physical and social education at school.

Data Validity Results

Data validity was ensured through source, technique, and time triangulation. Consistent findings across principals, teachers, and students confirmed that traditional games improved physical fitness, discipline, and motivation. Interview data were reinforced by observational evidence and documentation, strengthening the credibility of the findings. Time triangulation showed progressive improvement in stamina, enthusiasm, and concentration from the early to final stages of implementation.

Overall, the results indicate that integrating traditional games into the Healthy School Movement Program effectively improves students' physical health while fostering character, social interaction, and cultural appreciation. In contrast to JES studies that emphasize digital innovation through augmented reality and e-modules (Khusnunnisa & Andriani, 2025; Septiani et al., 2025; Zahro et al., 2024), this study highlights the complementary role of culturally grounded physical activities in achieving holistic educational outcomes.

Display Data by Nvivo

The results of coding using Nvivo software show that the implementation of traditional games in the Healthy School Movement Program (GSS) at SDN 2 Muara Dua has made a real contribution to improving students' physical health. Traditional

games have been proven effective in improving physical fitness. Types of traditional games include gobak sodor, stilts, and engklek, which are considered capable of providing healthy and fun physical exercise. The overview of the overall Nvivo coding results can be seen in Figure 3 below.

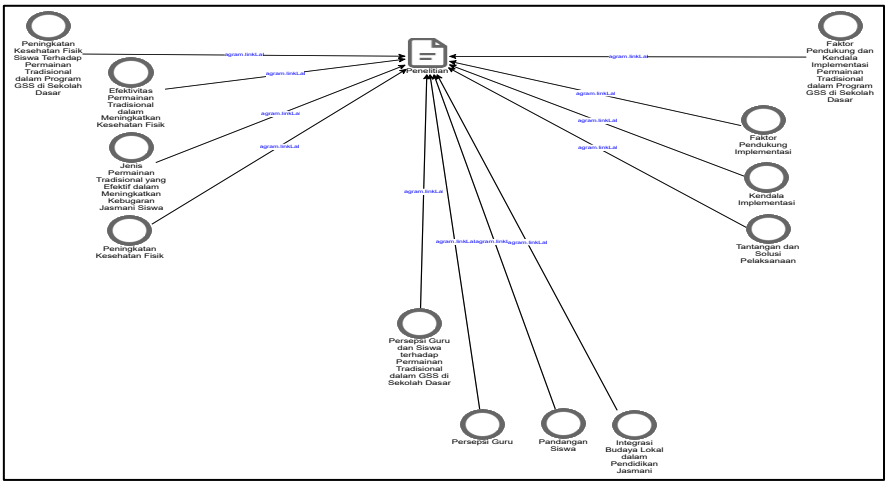

Figure 3. Research Coding Results by Nvivo

The implementation of traditional games within the Healthy School Movement (GSS) Program at SDN 2 Muara Dua has significantly contributed to improving students' physical health. Games such as gobak sodor, stilts, and engklek have been proven effective in improving physical fitness because they involve overall body coordination. These activities make students fitter, more fatigue-resistant, and more enthusiastic about learning. Supporting factors for the program's success include teacher support, student enthusiasm, and the availability of open space. Challenges include limited facilities, time, and varying student interests.

Schools are able to overcome these challenges through flexible scheduling, the use of available resources, and a variety of games to maintain engagement. Teachers' and students' perceptions of traditional games are also positive; teachers view these activities as both a means of exercise and a medium for learning character values such as teamwork, sportsmanship, and discipline. Students also find them enjoyable and helpful in strengthening social relationships. Beyond the physical benefits, this study confirms that traditional games play a role in preserving local culture and character education, thus supporting the goals of the Healthy Schools Movement while strengthening cultural identity within elementary schools. The detailed coding results regarding the improvement of students' physical health through traditional games are presented in Figure 4 below.

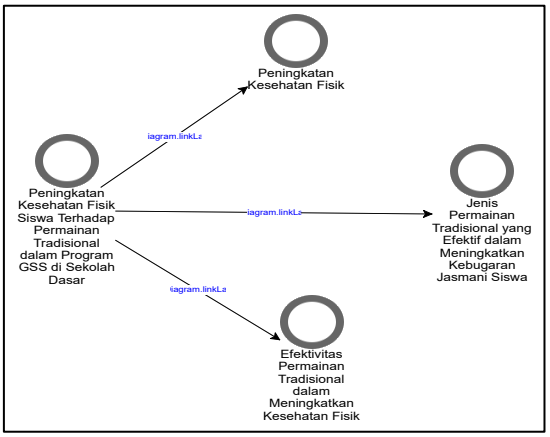

Figure 4. NVivo Coding Results: Improvement of Students' Physical Health through Traditional Games in the GSS Program in Elementary Schools

Based on the results of the Coding of Students' Physical Health Improvement towards Traditional Games in the GSS Program in Elementary Schools, the following data was obtained:

- The Effectiveness of Traditional Games in Improving Physical Fitness
- Types of Traditional Games that are Effective in Improving Students' Physical Fitness
- Improved Physical Health.

The coding results related to supporting factors and constraints in implementation are shown in Figure 5 below.

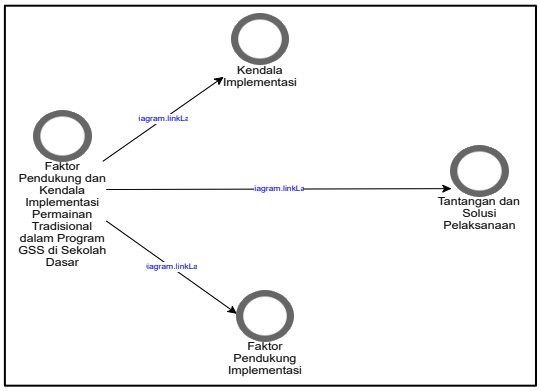

Figure 5. NVivo Coding Results: Supporting Factors and Constraints in the Implementation of Traditional Games in the GSS Program in Elementary Schools

Based on the results of coding using Nvivo software that has been carried out by the researcher, the researcher obtained data related to supporting factors and obstacles to implementing traditional games in the GSS program in elementary schools, as follows:

1. Supporting Factors for Implementation
2. Implementation Constraints
3. Implementation Challenges and Solutions

Furthermore, perceptions from teachers and students regarding traditional games are illustrated in Figure 6 below.

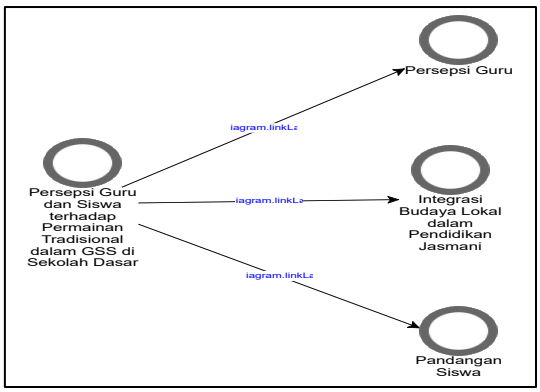

Figure 6. Nvivo Coding Results: Teachers' and Students' Perceptions of Traditional Games in the GSS Program in Elementary Schools

Based on the results of coding using Nvivo software that has been carried out by the researcher, the researcher obtained data related to Teacher and Student Perceptions of Traditional Games in the GSS Program in Elementary Schools, as follows:

2. Teacher Perception
3. Student Views
4. Integration of Local Culture in Physical Education

The results of coding using Nvivo software, it can be concluded that the implementation of traditional games in the Healthy School Movement Program (GSS) at SDN 2 Muara Dua has a significant positive impact on improving students' physical health. Traditional games such as gobak sodor, stilts, and engklek have proven effective in improving physical fitness because they involve full body movements and are fun. These activities not only make students fitter and more resistant to fatigue, but also foster enthusiasm in participating in learning at school. In addition, supporting factors such as teacher support, student enthusiasm, and the availability of open space are important elements that ensure the implementation of activities runs smoothly, although there are still obstacles such as limited facilities, time, and variations in student interests.

Despite facing a number of obstacles, the school was able to overcome them through innovation and creativity, such as flexible scheduling, the use of available resources, and providing a variety of games to maintain interest. Teachers' and students' perceptions of traditional games were also very positive; teachers viewed these activities not only as a means of exercise but also as a means of character learning that instilled the values of cooperation, sportsmanship, and discipline. Meanwhile, students felt more enthusiastic, closer to their friends, and motivated to actively participate. Overall, this study confirms that traditional games not only support students' physical health but also contribute to the preservation of local culture and the strengthening of character education, in line with the main objectives of the Healthy School Movement Program in elementary schools.

Discussion

Improving students' physical health through traditional games in the Healthy School Movement (GSS) Program in elementary schools

The discussion coding results regarding students' physical health improvement are presented in Figure 8 below.

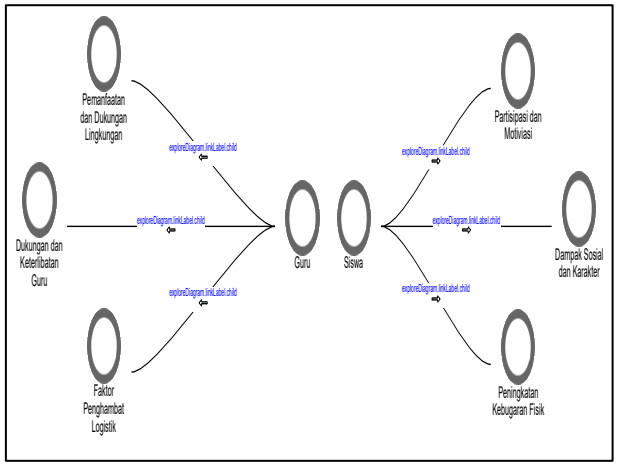

Figure 7. Nvivo Coding Results Discussion of Improving Students' Physical Health through Traditional Games in the Healthy School Movement (GSS) Program in Elementary Schools

Based on the results of Nvivo coding analysis, the implementation of traditional games in the Healthy School Movement (GSS) Program has proven highly effective in improving the physical fitness of elementary school students. Activities such as gobak sodor, stilts, and engklek are not just games, but serve as comprehensive physical training tools that stimulate children's stamina, muscle strength, and endurance. Active support from teachers, school policies that provide space for physical activity, and regular scheduling are key to the successful implementation of this program. In addition to impacting physical health, these activities also have a positive effect on students' cognitive aspects, where they become more focused, do not quickly fall asleep in class, and show increased concentration in learning.

The variety of traditional games in the GSS Program also contributes significantly to the development of various components of physical fitness. Gobak Sodor effectively trains speed, agility, and teamwork; tug-of-war strengthens muscles and endurance; hopscotch improves balance and coordination; while fortification and jump rope foster endurance and agility. The combination of these movements forms a balanced functional exercise, involving elements of strength, endurance, coordination, and agility. This diversity makes traditional games an active learning medium that is both fun and healthy, because children do not feel pressured by physical activity but instead view it as a motivating recreational activity.

Furthermore, the successful implementation of traditional games at SDN 2 Muara Dua reflects the interconnectedness of physical, social, and cultural aspects. Theoretically, these findings support Bronfenbrenner (1979) Ecological Systems framework, in which the school environment, as a microsystem, plays a crucial role in supporting child development through positive interactions between teachers and students. Barriers such as limited time and facilities can be overcome through school creativity and adaptation. In addition to health benefits, traditional games also strengthen character and cultural identity, instilling values of sportsmanship, cooperation, and discipline, as emphasized by Zahro et al. (2024). Thus, traditional games are not only a means of improving physical fitness, but also a strategic tool in building student personality and cultural pride in the elementary school environment.

Supporting factors and obstacles in the implementation of traditional games in elementary schools

The implementation of traditional games within the Healthy School Movement (GSS) Program demonstrated strong success thanks to the synergistic supporting factors within the elementary school environment. The active involvement of physical education (PJOK) and classroom teachers was a key element in ensuring the smooth implementation of the activities. Teachers served not only as supervisors but also as facilitators, providing direction, encouragement, and maintaining high student morale throughout the activities. The support of the principal, as a policymaker, provided legitimacy and institutional space for the integration of traditional games into routine school activities. Student enthusiasm and parental support also strengthened the sustainability of the activities, creating a healthy, joyful, and inclusive learning environment. Furthermore, physical environmental factors, such as spacious fields and simple facilities, were essential prerequisites for maintaining the continuity of physical activities that support the "Physical Health" dimension of the GSS program.

However, there are a number of obstacles faced in implementing traditional games in elementary schools. One major obstacle is time constraints due to busy academic schedules, which often sideline physical activities like traditional games. Weather factors also pose a significant obstacle, especially when rain or extreme heat disrupts students' comfort and safety while playing outdoors. Furthermore, limited facilities and simple play equipment limit the variety of activities. Challenges also arise from the diverse behavior of students—some are overly active and difficult to control, while others tend to be passive due to their greater interest in digital games. These obstacles reflect the dynamics of interactions within the school microsystem, which require adaptive adjustments from all elements of the educational system.

Despite facing a number of obstacles, schools and teachers demonstrated a high degree of adaptive capacity in maintaining the sustainability of traditional games. Strategies such as integrating activities into physical education (PJOK) hours, using alternative spaces such as halls during inclement weather, and modifying simple equipment were effective solutions that reflected the creativity of educators. Teachers also played a crucial role in motivating students and managing classes to

maintain balanced participation. The school's resilience in the face of these obstacles demonstrates that systemic support, teacher creativity, and a collaborative spirit can transform challenges into opportunities. Thus, traditional games serve not only as a means of improving physical health but also as an instrument for character building, strengthening cultural values, and achieving the holistic goals of the Healthy Schools Movement.

Teacher and student perceptions of traditional games in the Healthy School Movement Program in elementary schools

Teachers' perceptions of traditional games within the Healthy School Movement (GSS) Program demonstrate a very positive view of the holistic benefits of this activity. Teachers believe that traditional games are not merely physical activities, but also effective means of fostering enthusiasm, cooperation, sportsmanship, and discipline among students. Through traditional games, teachers see the learning of character values that align with the function of physical education in developing healthy and characterful individuals. This perspective reinforces Zahro et al. (2024) theory that traditional games contain noble values passed down from generation to generation and are relevant for application in the context of modern education. In the implementation of GSS, these teachers' views emphasize that traditional games support three main pillars—Physical Health, Mental Health, and Environmental Health—which play a vital role in building healthy lifestyle habits in schools.

Meanwhile, students' perceptions of traditional games were also very positive. They considered these games fun, challenging, and provided opportunities for active socialization with friends. These activities made them healthier, less tired, and increased their enthusiasm for learning in class. The sense of joy and satisfaction emanating from these activities indicated that students experienced a balance between enjoyment and health benefits, consistent with S. Fajar (2020) findings that physical fitness can be achieved through enjoyable and meaningful physical activity. Furthermore, traditional games help students develop social skills, such as cooperation, communication, and empathy, which in turn strengthen their social relationships within the school environment. Thus, traditional games function not only as a means of exercise but also as a social and emotional medium that plays a significant role in children's overall development.

Furthermore, the positive perceptions of teachers and students reflect the successful integration of local cultural values into the education system through traditional games. These activities not only maintain students' physical fitness and mental health but also play a vital role in preserving the nation's cultural heritage. Within the context of Bronfenbrenner (1979) developmental ecology theory, this phenomenon demonstrates a harmonious interaction between the microsystem (school and family) and the macrosystem (local culture), creating an optimal environment for children's growth and development. Teachers act as agents of cultural value preservation through physical education, while students become recipients and inheritors of these values through enjoyable play experiences. Thus, the GSS Program at SDN 2 Muara Dua can be considered an example of the implementation of culture-based education that not only promotes physical and

mental health but also strengthens national cultural identity amidst the challenges of the digital era.

4. Conclusion

This study concludes that the implementation of traditional games within the Healthy School Movement (GSS) Program is effective in improving the physical health of elementary school students at State Elementary School 2 Muara Dua, Lhokseumawe City. Traditional games such as *gobak sodor*, *engklek*, tug of war, and *bentengan* encourage active movement that enhances students' physical fitness, stamina, concentration, and readiness to learn. The findings confirm that these activities function not only as recreational practices but also as structured educational strategies that support healthy lifestyles in the school environment. The success of the program is supported by strong collaboration among school principals, teachers, parents, and students, which creates a positive and sustainable implementation climate. Although challenges related to time constraints, weather conditions, and limited facilities were encountered, the school demonstrated effective adaptive strategies through flexible scheduling, the use of open spaces, and simple modifications to available equipment. In addition to physical health benefits, traditional games contribute to character development and social interaction by fostering cooperation, discipline, and sportsmanship while strengthening students' connection to local cultural values. Overall, this research confirms the success of traditional games as a holistic and culturally responsive approach to school health promotion. Future studies are recommended to expand the scope of research to multiple schools and to explore the long-term impact of traditional game-based programs on students' physical and psychosocial development.

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