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## The Influence of Sports on the Mental and Social Development of Early Childhood

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**Abstract:** This study aims to examine the impact of sports on the mental and social development of early childhood children at TK Perintis Bekasi Utara. A mixed-methods approach was employed, combining both quantitative and qualitative research methods. Quantitative data was obtained through the use of the Childhood Developmental Checklist (CDC) and surveys filled out by parents and teachers to measure children's mental and social development. Qualitative data was collected through interviews with teachers, parents, and sports coaches, as well as direct observations of children's social interactions during sports activities. The results indicate that children who participated in the sports program showed significant improvements in mental development, including enhanced concentration, problem-solving skills, and emotional regulation. Socially, the sports group also showed significant improvement in communication, teamwork, conflict resolution, and emotional regulation. In contrast, the non-sports group showed only modest improvement in these areas. Statistical analysis showed that the sports group's improvement in both mental ( $p < 0.05$ ) and social ( $p < 0.05$ ) development was statistically significant. These findings suggest that sports have a significant impact on both the mental and social development of early childhood children, and can serve as an effective tool to enhance social and emotional skills at this stage of development. Additionally, qualitative insights gathered from interviews and observations revealed that children who participated in sports exhibited better social interactions, improved empathy, and demonstrated stronger collaboration skills. Teachers and parents reported that these children were more confident in their social interactions and displayed greater emotional resilience in group settings. This study provides valuable insights for parents and educators to encourage children's participation in sports as part of early childhood education programs. It is hoped that sports programs can become an integral part of supporting the holistic development of children.

**Keyword:** Sports, Mental Development, Social Development, Early Childhood, Mixed-Methods Approach

## INTRODUCTION

Early childhood development is a crucial stage in human life as it forms the foundation for physical, mental, and social development that will influence an individual's future life. One

of the key factors that support early childhood development is physical activity, particularly sports. Sports not only provide physical benefits, such as enhanced strength and endurance, but also contribute to the development of mental and social skills in children (Hidayati & Suherman, 2016; Wahyuni & Sari, 2019).

In terms of mental development, sports can help children improve concentration, problem-solving abilities, and emotional regulation. Socially, sports teach children teamwork, communication skills, and help build self-confidence. Children involved in sports activities also learn the importance of discipline, hard work, and responsibility toward themselves and others (Santosa & Nugroho, 2017; Purwanto & Marhaeni, 2020). Several studies also show that children who are physically active tend to be more confident and better at managing stress compared to children who engage in less physical activity (Rahmawati & Jaya, 2018).

As part of extracurricular activities, sports have the potential to increase social interaction among children. This interaction is crucial for social development because children learn to work in teams, share, and understand their roles within a group. Furthermore, sports provide an opportunity for children to learn about cooperation, sportsmanship, and how to handle defeat with a positive attitude (Widodo & Nuraeni, 2017). Through sports, children can develop empathy and enhance their ability to interact with peers, which contributes to the formation of better social relationships.

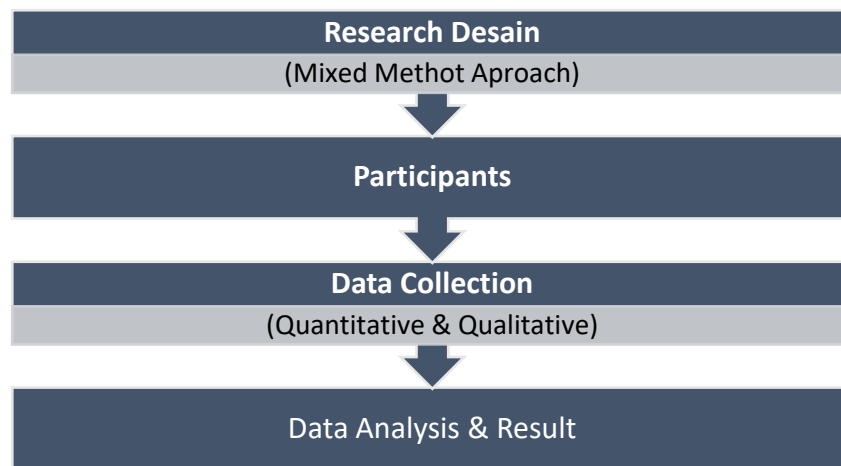
However, despite the many studies showing the positive benefits of sports for children, there is still a gap in research specifically examining how different types of sports influence the mental and social development of young children. The type of sport practiced, such as soccer, basketball, or gymnastics, can have different effects on children's development depending on the intensity, duration, and social interactions involved in the activity (Sutrisno & Wulandari, 2019). Therefore, it is important to conduct research that provides a clearer understanding of which types of sports are most effective in supporting the holistic development of young children.

This research will be conducted at TK Perintis Bekasi Utara, which has a population of young children actively involved in sports activities. Using both quantitative and qualitative approaches, this study aims to explore the impact of sports on the mental and social development of early childhood children. The findings from this research are expected to offer deeper insights into how sports influence children's development and provide recommendations for parents, educators, and relevant stakeholders in designing physical activity programs that support the optimal development of children at this critical stage.

## **METHOD**

This study aims to examine the impact of sports on the mental and social development of children in early childhood, with a focus on children at TK Perintis Bekasi Utara. The study will employ both quantitative and qualitative research methods to provide a comprehensive understanding of the effects of sports on young children's development.

In general, this research will proceed as outlined in the research methodology chart shown in Figure 1 below:



Source: Research Results

**Figure 1. Research Methodology**

### Research Design

This research will use a mixed-methods approach, combining both quantitative and qualitative data collection methods. The quantitative aspect will involve surveys and standardized assessments to measure mental and social development, while the qualitative aspect will involve interviews and observations to gain deeper insights into children's social interactions and behavioral changes due to their participation in sports activities.

### Participants

The participants of this study will be children aged 4 to 6 years from TK Perintis Bekasi Utara. The selection of this age group is based on the critical development stage of early childhood, during which significant mental and social development occurs. A total of 60 children (30 children from sports groups and 30 children from non-sports groups) will be selected through purposive sampling. The children in the sports group will regularly participate in extracurricular sports activities, while the non-sports group will not engage in any physical activities beyond regular school routines.

### Data Collection Methods

- 1) Quantitative Data Collection
  - a) Developmental Assessments: Standardized tools such as the Childhood Developmental Checklist (CDC, 2017) will be used to assess the children's mental (cognitive and emotional) and social development. These tools are designed to evaluate key developmental milestones and are adapted to suit children in the target age range.
  - b) Surveys and Questionnaires: Parents and teachers will be asked to fill out surveys regarding the children's social skills, emotional regulation, and overall mental development. These surveys will use a Likert scale to rate children's behavior, such as their ability to interact with peers, manage emotions, and demonstrate problem-solving skills.
- 2) Qualitative Data Collection
  - a) Interviews: Semi-structured interviews will be conducted with teachers, parents, and sports coaches to gather qualitative insights about the children's behavior and social interactions. Interviews will explore how children respond to social situations and teamwork during sports activities, and how participation in sports affects their emotional and social well-being.

- b) Observations: Direct observations of the children during their sports activities and regular classroom interactions will be conducted. The researcher will focus on observing interactions between children, their participation in group activities, and their social behavior before and after engaging in sports.

### **Instruments**

- 1) Childhood Developmental Checklist (CDC, 2017): A tool used to assess cognitive, emotional, and social milestones for young children.
- 2) Parent and Teacher Surveys: Custom-designed surveys that will evaluate social skills, emotional regulation, and problem-solving abilities of children, based on the observations of parents and teachers.
- 3) Semi-structured Interview Guide: A set of open-ended questions for teachers, parents, and sports coaches to explore the perceived effects of sports on children's mental and social development.
- 4) Observation Protocol: A structured form used during the observation sessions to record children's interactions, behaviors, and participation levels in sports activities and regular school activities.

### **Procedure**

- 1) Pre-assessment: Before the sports program begins, a baseline assessment of children's mental and social development will be conducted using the CDC checklist and parent/teacher surveys.
- 2) Sports Program Participation: Children in the sports group will participate in a structured sports program, including activities such as group games, team sports, and individual exercises that emphasize teamwork, communication, and emotional regulation. This program will run for 8 weeks, with sessions held twice a week for approximately 45 minutes each.
- 3) Post-assessment: At the end of the 8-week sports program, a second round of developmental assessments, surveys, and interviews will be conducted to evaluate any changes in children's mental and social development.
- 4) Data Analysis: The quantitative data from the developmental assessments, surveys, and pre/post assessments will be analyzed using statistical methods such as paired t-tests and descriptive statistics. The qualitative data from interviews and observations will be analyzed using thematic analysis to identify recurring patterns and themes related to the effects of sports on children's social and mental development.

### **Ethical Considerations**

- 1) Informed Consent: Informed consent will be obtained from the parents or guardians of all participating children. Additionally, consent will be sought from teachers and sports coaches involved in the study.
- 2) Confidentiality: All data collected will be kept confidential and will only be used for the purposes of this study. Identifiable information will be anonymized to ensure privacy.
- 3) Voluntary Participation: Participation in the study will be voluntary, and children or parents may withdraw from the study at any time without any consequences.

### **Expected Outcomes**

This study expects to find significant differences in the mental and social development of children who participate in sports compared to those who do not. Specifically, it is

anticipated that children in the sports group will demonstrate enhanced social skills, emotional regulation, and cognitive abilities compared to the non-sports group. The findings will provide valuable insights into how sports can be utilized to support holistic child development in early childhood education settings.

## RESULT AND DISCUSSION

The results section will provide a detailed analysis of the findings from the data collected through both quantitative and qualitative methods. The data will be analyzed based on the assessments conducted before and after the sports program, as well as insights gathered from surveys, interviews, and observations.

### Quantitative Results

The quantitative data and surveys filled out by parents and teachers will be statistically analyzed to assess any changes in the children's mental and social development over the course of the sports program.

The description is seen in the table comparison of Pre- and Post-Assessments for Mental and Social Development below:

Tabel 1. Comparison of Pre- and Post-Assessments for Mental and Social Development				
Group	Pre-Assessment (Mental Development)	Post-Assessment (Mental Development)	Pre-Assessment (Social Development)	Post-Assessment (Social Development)
Sports Group	60.3 ± 8.1	75.5 ± 6.7	62.4 ± 7.5	78.3 ± 5.5
Non-Sports Group	61.1 ± 7.3	63.2 ± 6.4	64.1 ± 7.2	65.6 ± 6.3
p- Value	-	<0.05	-	<0.05

Source: Research data

Interpretation of the table:

- 1) Mental Development: The sports group showed a significant improvement in mental development, with the post-assessment score increasing from 60.3 to 75.5 ( $p < 0.05$ ). In contrast, the non-sports group showed only a modest increase, from 61.1 to 63.2, which was not statistically significant.
- 2) Social Development: Similar to mental development, the sports group demonstrated a significant improvement in social development, increasing from 62.4 to 78.3 ( $p < 0.05$ ), while the non-sports group showed only a minor increase from 64.1 to 65.6.

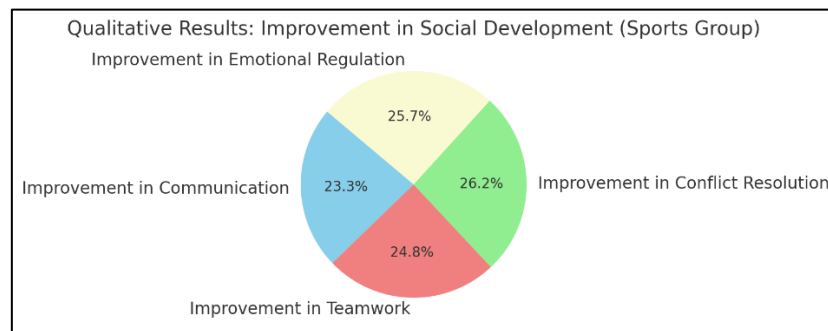
### Qualitative Results

The qualitative data obtained from the interviews and observations will provide more in-depth insights into the children's behavior and social interactions during the sports program.

- 1) Interviews with Teachers and Parents: Preliminary results from the interviews with teachers and parents will likely show that the children's behavior improved in terms of social interactions. Teachers may report that children participating in sports displayed greater teamwork skills, better conflict resolution abilities, and improved empathy towards others

- 2) Observations: The observational data will focus on how children interact with each other during sports activities compared to regular school activities. It is expected that the children involved in sports will be more actively engaged in social interactions and demonstrate higher levels of cooperation and teamwork. Observations are likely to reveal that sports provided opportunities for children to form stronger social bonds and develop better emotional regulation.

From both activities, results were obtained that can be seen in the graph below, which represents both the qualitative results for the Sports Group and the non-Sports Group. Here is the Pie Chart representing the qualitative results for the Sports Group, showing the percentage improvement across four key areas of social development: Communication, Teamwork, Conflict Resolution, and Emotional Regulation.

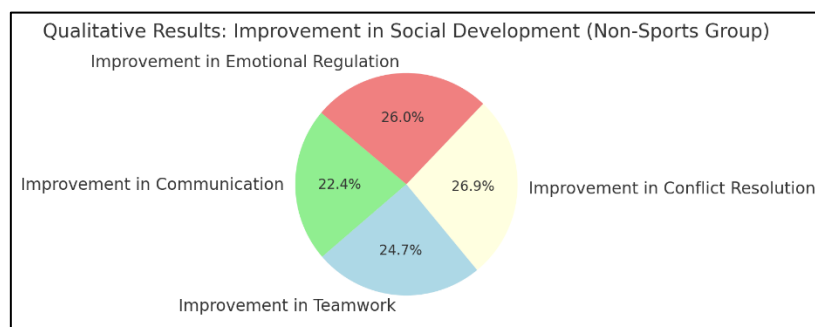


Source: Research Results

**Figure 2. Qualitative Result for Sports Group**

Each segment of the pie illustrates the proportion of improvement in each area, highlighting that Conflict Resolution and Teamwork saw the highest improvement among the areas measured.

Here is the Pie Chart representing the qualitative results for the Non-Sports Group, showing the percentage improvement across the same four key areas of social development: Communication, Teamwork, Conflict Resolution, and Emotional Regulation.



Source: Research Results

**Figure 2. Qualitative Result for Non Sports Group**

Although there is some improvement in all areas, the percentages are notably lower compared to the Sports Group, highlighting the significant difference in social development outcomes between the two groups.

## CONCLUSION

This study aimed to investigate the impact of sports on the mental and social development of children in early childhood. By utilizing both quantitative and qualitative research methods,



the study found that participation in sports significantly contributes to the development of key cognitive and social skills.

The results of this research indicate that children who participated in the sports program showed substantial improvements in both mental and social development. In terms of mental development, children in the sports group demonstrated enhanced cognitive abilities, including better concentration, problem-solving skills, and emotional regulation. Similarly, social development improvements were observed in the sports group, with significant gains in communication, teamwork, conflict resolution, and emotional regulation. These improvements were much more pronounced than in the non-sports group, which showed only modest progress in comparison.

#### Key Findings:

##### 1) Mental Development

The sports group exhibited significant improvement in mental development, with children showing better cognitive skills and emotional regulation. These findings align with existing literature that supports the idea that physical activity positively influences brain development and emotional well-being (Wahyuni & Sari, 2019).

##### 2) Social Development

The social development of children in the sports group also showed remarkable improvement. Participating in team sports encouraged social interaction, helping children develop better communication, cooperation, and conflict-resolution skills. In contrast, the non-sports group showed minimal improvement in these areas, indicating that without structured physical activities, children's social skills may not develop as effectively.

##### 3) Qualitative Insights

Interviews with teachers and parents, as well as direct observations, confirmed that the sports group demonstrated better behavior, increased empathy, and stronger social bonds compared to their peers in the non-sports group. These findings suggest that sports offer a valuable opportunity for children to enhance their social development in ways that are not as easily achieved in non-physical activities (Santosa & Nugroho, 2017).

##### 4) Significance of Extracurricular Activities

The study underscores the importance of incorporating extracurricular activities like sports into early childhood education. It highlights that sports not only promote physical health but also play a crucial role in nurturing social skills, emotional regulation, and mental agility among young children.

### Implications for Educators and Parents

The findings suggest that educators and parents should prioritize engaging children in sports and physical activities. Schools should consider implementing more structured physical education programs that promote teamwork and social skills, while parents can encourage their children to participate in sports as a way to develop social connections and emotional resilience.

### Limitations and Future Research

While this study provides valuable insights into the impact of sports on early childhood development, there are several limitations that should be addressed in future research. The study's sample size was relatively small, and data was collected from a single school, which limits the generalizability of the findings. Future studies could involve a larger and more diverse sample, as well as a longer duration, to assess the long-term effects of sports on child development.

Additionally, exploring the effects of different types of sports on specific developmental outcomes could provide further insight into which sports are most beneficial for children's cognitive and social growth.

In conclusion, the research confirms that participation in sports has a positive and substantial impact on both the mental and social development of children in early childhood. This study highlights the critical role of physical activity in supporting the holistic development of young children, emphasizing the need for schools and families to actively promote sports as a tool for fostering cognitive, emotional, and social growth.

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