

## Traditional Games as a Means of Cognitive Stimulation: An Analysis of Child Development: A Systematic Review



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**ABSTRACT:** This study aims to analyze the impact of traditional games on children's cognitive development. In the midst of the rise of digital games, traditional games are often neglected even though they have great potential as an educational tool. Through a systematic review of various relevant studies, this study found that traditional games such as Sundanese Manda, Gobak Sodor, Congklak, and Dakon can provide significant cognitive stimuli for children. The game helps improve children's problem-solving, logic, and social comprehension skills. In addition, traditional games also play a role in strengthening social interaction and cultural values. Although many studies have focused on digital games, the results of this study highlight the importance of integrating traditional games in formal education to maximize children's cognitive development. Therefore, it is recommended that traditional games be recognized and applied more widely in the early childhood education curriculum.

**KEYWORDS:** traditional games, cognitive development, Stimulus, children, Culture.

### I. INTRODUCTION

Traditional games are a rich cultural heritage of Indonesia, so many contain educational and social values that are important for children's development (Iswinarti & Suminar, 2019; Munir & Awiria, 2020; Regiana et al., 2020). In the midst of the rise of digital games that dominate children's attention today, traditional games are often overlooked, even though they have great potential as a learning tool. With a variety of interesting forms and rules, traditional games are not only entertaining, but also stimulating the cognitive, emotional, and social aspects of children (Suherman et al., 2019; Yilmaz et al., 2022).

Although many studies show the educational benefits of traditional games (Tan et al., 2018; Yuxuan et al., 2021), but there are still few studies that specifically analyze the impact of traditional games on children's cognitive development (Estrada-Plana et al. 2019) Often, the focus of research is more on modern or digital games, while traditional games receive less of the same attention. This creates a knowledge gap on how traditional games can be integrated into children's education, as well as their potential benefits that have not been fully revealed.

On the other hand, the social and cultural context of traditional games is also often overlooked (Komariah dan Salim 2019) The various types of traditional games that exist in each region have unique values that can contribute to the way children learn to interact with their social environment (Cornejo et al. 2021; Morelli, Henry, dan Spielvogel 2019) so that without a deep understanding of this context, of course, there is a great risk of missing out on the opportunity to utilize cultural richness as a valuable source of learning. This study aims to explore how traditional games can function as an effective cognitive stimulus.

By conducting this research, it is hoped that it can provide new and in-depth insights into the role of traditional games in children's cognitive development. This research will not only fill in the gaps that exist in the literature, but also encourage the integration of traditional games in educational practices, so that children can experience the full benefits of games that have existed for centuries.

### II. MATERIALS AND METHODS

#### *Search Strategy*

This research is at the data collection stage, the author collects national articles through google Scholar, PubMed and scopus with the "Publish or Perish" application, the author collects articles published in 2019-2024, in the journal update the

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author searches for journal articles on a scale of the last 5 (five) years, using the PICO method is the method that the author applies in the search for articles to get new findings (Cumpston et al., 2021).

## Selecting Studies

In this study, the author collects the necessary articles, then the author extracts the data. The author uses a reference in this method is to use the Inclusion and Exclusion criteria so that the data becomes more specific, and if the author finds an article that is not suitable, the data will be extracted (Pustejovsky, Swan, dan English 2023) with criteria that will then be canceled the description of the exclusion method: (a) Research report (thesis, thesis, dissertation) and book; (b) In the last 5 years (<2019); (c) Outside of Indonesian; (d) Not traditional games; (e) Not traditional play against child stimulus; (f) Do not have a DOI. Furthermore, the inclusion criteria used are: (a) Research articles in the last 5 years (2019-2024); (b) Indonesian; (C). Traditional games; (d) traditional games on children's cognition; (e) Have a DOI; (F). Increasing the stimulus of children with traditional dressing.

## Procedure

In Search, use the Publish or Perish application by selecting the Google Scholar, PubMed, and Scopus databases. The author found articles from Scopus 200 articles, PubMed 199 articles, and Google Scholar 620 articles, so that the total number of articles found was 1019 articles. Furthermore, the articles found by the author will be processed and analyzed through several screening processes based on exclusion and inclusion criteria. After meeting the criteria, only 7 articles were sidelined. Most articles are not used because they do not discuss traditional games.

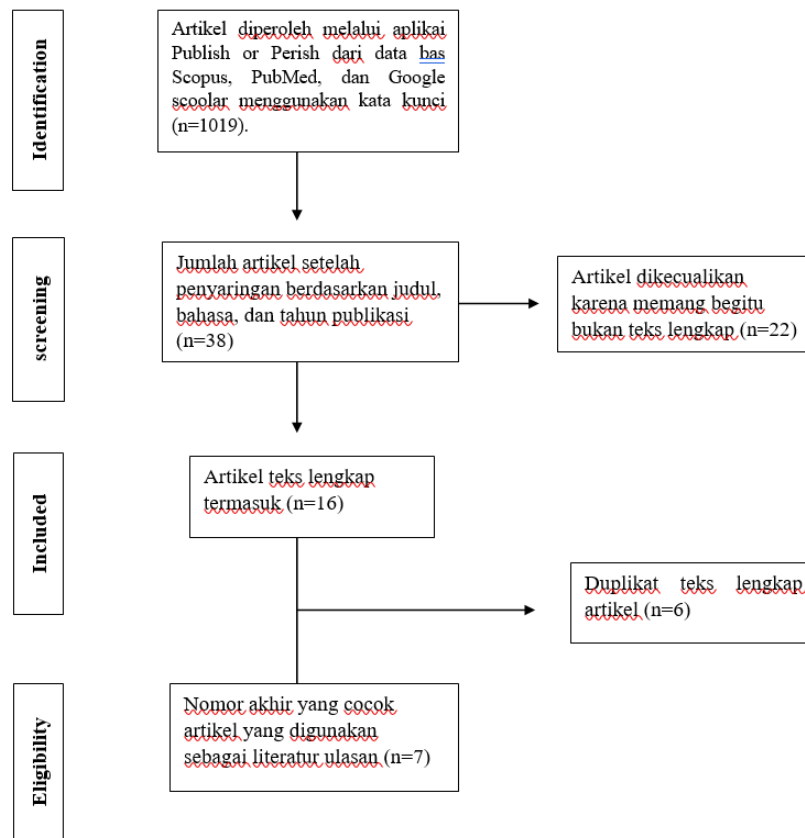


Figure 1. PRISMA Research Flow Diagram

The results of the study should be systematically arranged in a table showing that a thorough literature evaluation found that 7 articles met the research criteria.

Table 1: Summary of the article Traditional games on children's cognitive stimulation

No	Author and years	Objective	Method	Result
1.	(Ismawati dan Lutfiah 2020)	The purpose of this study is to measure the effect of the application of Sundanese	Pre- Eksperimental Design	The results of this study showed that there was a significant improvement in children's cognitive development after

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		Manda Geometric games on early childhood cognitive development in the Cahaya Qolbi Mojokerto Play Group.		being given the Sunda Manda Geometric game treatment.
2.	(Nisak 2023)	The purpose of this study is to explore the development of cognitive skills in early childhood through the traditional game of Gobak Sodor.	Observasional	These results highlight the effectiveness of Gobak Sodor in supporting cognitive development in early childhood through play-based learning. These games provide a practical and engaging way for children to develop important cognitive and social skills.
3.	(Huda 2023)	The main purpose of this study is to train the cognitive abilities of children in Group B PAUD (Early Childhood Education) aged 5-6 years through the use of traditional congklak games.	participatory training and mentoring.	The results of this study show that this training is effective in improving teachers' skills and knowledge in using traditional games as an educational tool for cognitive development in young children.
4.	(Meuthia dan Suyadi 2021)	Tujuan utama dari penelitian ini adalah untuk mengembangkan aspek kognitif anak usia dini menggunakan media permainan dadu.	Qualitative Descriptive	The results of this study state that dice games are a useful medium to improve cognitive abilities in early childhood, providing a fun and interactive way to learn and develop important skills.
5.	(Kusuma, Sukmono, dan Tanto 2022)	The purpose of this study is to explore how the traditional game of dakon can stimulate cognitive development in children, as seen through the lens of Vygotsky and Piaget's theory.	Qualitative Descriptive	The study concluded that traditional games such as dakon can be effective in stimulating cognitive development, with stimulating properties varying based on the theoretical perspective applied.
6.	(Kurniawaty 2022)	The purpose of this study is to explore the implementation of the educational game "Snake Ladder" in developing the cognitive abilities of children aged 5-6 years.	Qualitative Descriptive	The results of the study showed that (1) the use of snake and ladder games to improve the cognitive abilities of children aged five to six years including the creation of RPPM and RPPH with snake and ladder games to improve children's intelligence. Furthermore, excellent cognitive development, such as mentioning the names of family members, explaining the surrounding environment, mentioning frequently visited streets, following rules, getting to know the surrounding objects, knowing big and small, and being able to sort the number, shape, and size. (3) Internal factors, namely the physiological aspects of the child, and external, namely parenting and parental education, affect the cognitive development of children.

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7.	(Wilhelmina, Lestari, dan ... 2024)	The main purpose of this study is to determine the improvement of early childhood cognitive abilities through the traditional game of Congklak.	Qualitative Descriptive	As a conclusion from the results of the study, completeness occurred in the initial condition of 15.79 percent (3 children), in Cycle I it was 57.89 percent (11 children), and in Cycle II it was 89.47 percent (17 children). Group B of Tunas Mekar II Kindergarten uses traditional congklak games to improve early childhood cognitive abilities.
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### III. DISCUSSION

This study explores the impact of traditional games on children's cognitive development, especially in an era where digital games are increasingly dominant. Through various screened studies, it was found that traditional games have great potential to stimulate children's cognition in a different way than modern games (Huda, 2023; Nisak, 2023). Several traditional games such as Sundanese Manda, Gobak Sodor, Congklak, and Dakon make a significant contribution to improving children's cognitive skills, including problem-solving, logic, and social understanding skills (Kurniawaty, 2022; Wilhelmina et al., 2024; Kusuma et al., 2022).

Research also shows that these games play an important role in developing children's ability to follow rules, strategize, and improve social interaction, all of which contribute to healthy cognitive development (Ismawati & Lutfiah, 2020; Meuthia & Suyadi, 2021). With a culturally based and interactive approach, traditional games help children in understanding the world around them as well as reinforcing social and cultural values (Luque Carbajal & Baranauskas, 2019).

However, the study also highlights the lack of attention to traditional games in the context of formal education, despite their great potential. Many studies have focused on digital games, and studies on traditional games are still limited. Therefore, there is a need to integrate traditional games into the educational curriculum to optimize the cognitive development of children.

### V. CONCLUSIONS

Traditional games have been proven to provide effective cognitive stimulation for children, especially in developing problem-solving skills, social skills, and logic. With the integration of these games into education, children can benefit from activities that are not only fun, but also educate and reinforce cultural aspects. Although digital games are increasingly dominating, traditional games still have an important role that has not been fully explored in supporting children's cognitive development. Further implementation in formal education settings is strongly encouraged to achieve wider benefits.

### ACKNOWLEDGMENT

The author would like to thank everyone involved in this research as they continue to be committed and dedicated to writing this scientific article. Their input and their invaluable time have been crucial to this research.

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