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**The Relationship Between Play Patterns and the Development and Maturation of Children's Thinking Abilities (Cognitive) of Preschool Age in Kindergarten**Kasmiati^{1*}, Warda M², Rahayu³, Rizki Amalia⁴, Lidia Fitri⁵¹ PGMI Study Program, Sultan Aji Muhammad Idris State Islamic University Samarinda, Indonesia² Nursing Study Program, Arunika Dictionary Health College, Palopo, Indonesia³ Midwifery Study Program, STIK Makassar, Indonesia⁴ Midwifery Study Program, Kader Bangsa University, Indonesia⁵ Midwifery Study Program, Helvetia Health Institute Pekanbaru, Indonesia**ABSTRACT**

The function of play and interaction in games has an important role in children's cognitive and social development. Playing gives a relaxing effect to children. The purpose of this study was to determine the relationship between playing patterns and the cognitive development of preschool children. This research method is a quantitative study with a survey analysis research design with a cross-sectional study approach. The sampling technique used was a total sampling of 30 students. The instrument used was a questionnaire sheet. The results of the analysis of the relationship between play patterns and cognitive development showed that there was a relationship between play patterns and cognitive development, this was based on the results of the chi square test showing that $\alpha < 0.05$ with a value of $\alpha = 0.033$. The conclusion of this study There is a relationship between play patterns and cognitive development in Kindergarten.

Keywords: Relationships, Play Patterns, Development, Maturation, Abilities, Children's Thinking (Cognitive), Pre-School Age, Kindergarten

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1. Introduction

Cognitive is a thinking process that includes an individual's ability to analyze, connect, and consider an event or incident. Cognition is related to intelligence, cognition is





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passive or static which is the potential or power to understand something, while intelligence is more active which is the actualization or manifestation of the power of thinking in the form of activity or behavior. Cognitive intelligence is an individual's ability to think in analyzing, identifying, assessing, and considering to solve a problem.

Early childhood develops has its own characteristics and uniqueness in each child. Age maturity, sensory maturity, motor maturity, and mental maturity are important factors that influence the pattern of child development. Age maturity in children greatly influences the development of physical motor skills, cognitive, language, social emotional, and aesthetic values. Other factors that can influence child development are family background factors and the social environment around the child.

Speech and language development disorders are developmental disorders that are often found in children aged 3-16 years. The incidence rate ranges from 1% to 32% in the normal population (Soetjiningsih, IG. N. Gde Ranuh, 2014). It is estimated that more than 200 million children in developing countries fail to achieve their optimal development potential due to poverty, malnutrition, and an unsupportive environment, which affects children's cognitive, motor, emotional, and social development. In 2016, the population of Indonesia aged 0-5 years reached 29 million people or 15 percent of the total population. Meanwhile, in the province of South Sulawesi itself, the number of children aged 0-5 years is around 332,449 children (Ministry of Health of the Republic of Indonesia, 2017).

Children and play are two inseparable things. Piaget mentioned playing as a form of reflex thinking in children while Vygotsky mentioned playing facilitates children to build their knowledge. Playing, just like learning, is the life and work of children. Regardless of whether the child has problems or not, normal or special needs. Children's limitations in verbal language, then play is the right tool to help the child's counseling process. Playing gives a relaxing effect to children. (Daniati, R. 2013).

The cognitive aspect is the main aspect in many educational curricula and is the benchmark for assessing child development. Cognitive, which comes from the Latin word *cognitio*, means recognition, which refers to the process of knowing or to knowledge itself. In other words, the cognitive aspect is an aspect related to reason or the process of thinking, namely the ability and activity of the brain to develop rational abilities.





2. Research Methods

This research method was implemented using the Total Sampling Technique in Kindergartens in Gowa Regency. The population in this study were all children who attended school in Kindergartens in Gowa Regency, totaling 30 students. The sample was part of the number and characteristics of the population. Data Collection:

- 1) Primary Data: Primary data collection was carried out by distributing questionnaires to determine the relationship between Play Patterns and the Cognitive Development of Preschool Children at Ali Imran Kindergarten, Makassar City.
- 2) Data : Secondary data collection was carried out by visiting Ali Imran Kindergarten, Makassar City in order to determine the population size and then determine the sample size in this study.

Data processing

- 1) Editing

Editing is the stage of activity to check the validity of incoming data, such as checking the completeness of the questionnaire, the clarity of the answers, the relevance of the answers and the uniformity of a measurement.

- 2) Coding

Coding is the activity stage of classifying data and answers according to their respective categories to make it easier to group data.

- 3) Processing

Processing is the stage of data processing activities so that it can be analyzed. Data processing is done by entering the data from the questionnaire into the master table.

3. Results and Discussion

a. Results

Table 1.
Play Patterns with Cognitive Development

Pattern Play	Development Cognitive			
	Good		Not enough	
	n	%	n	%
Good	14	46.7	15	50
Not enough	16	53.3	15	50





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Volume 3 | Number 1 | March 2025 |



Total	30	100	30	100
P = 0.033				

Based on the data obtained by the Kindergarten from the results of data analysis in table 1 using the Chi-square Test, the significance is $\rho = 0.033$ where $\rho < 0.05$, then H_0 is accepted, which means that there is a significant relationship between Play Patterns and Cognitive Development at Kencana Kindergarten, Tobadak District, Central Mamuju Regency.

b. Discussion

1. Respondent Characteristics Based on Age, Education and Occupation

Respondents' characteristics based on age are between 5-6 years old, which is 25 children (83%) and the least is 3-4 years old, which is 5 people (17%). Respondents' characteristics based on children who have parents with junior high school and junior high school education are the same, which is 9 people or (30%), parents with a Bachelor's degree are 8 people or (26%) and parents with elementary school and diploma education are the least, which is only 2 people each or (7%). Respondents' characteristics who have parents who do not work/housewives are 15 people and children who have parents with civil servant jobs are at least 3 people or (10%).

2. The Relationship between Play Patterns and Cognitive Development in Preschool Children

The results of the study showed that there was a relationship between Play Patterns and Cognitive Development in Kindergartens in Gowa Regency. This was proven by the results of the chi-square test which obtained a significance of $\rho = 0.33$ where $\rho < 0.05$.

The results of univariate research from children with good and poor play patterns are the same, namely 15 or (50%). While the results of univariate research for cognitive development are as many as 16 people (54%) children with poor development and children with good cognitive development are the least, namely 14 children or (47%). This is in line with research conducted by Yuhatriati and





Wahyuni D (2016) who found Kindergarten results from children's cognitive abilities through play.

Based on the results of this study that children who have parents with low education are related to their children's cognitive development. And also parents who work are also very capable of influencing children's development, this is due to the lack of parental control, especially mothers, on what are the important things that can help children's development, especially with play patterns.

4. Conclusion

- 1) The results of the study on the relationship between play patterns and cognitive development in Kindergartens in Gowa Regency and its discussion have been described and the researcher concluded that there is a relationship between play patterns and cognitive development in Kindergartens. This is based on the results of the chi square test showing that $\alpha < 0.05$ with a value of $\alpha = 0.033$.
- 2) For Kindergarten managers and supervisors, it is hoped that they can improve the quality of child care patterns and add to children's play patterns.
- 3) The results of this study can add to the discourse and scientific references that can be used to conduct research related to children's cognitive development through play.

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Volume 3 | Number 1 | March 2025 |



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