

## Original Research Article

## Analysis of Rough Motoric Development in 1-3 Years Old Children in Renda Village, Towea District, Muna Regency, Southeast Sulawesi

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**Abstract:** One of the main problems for middle- and low-income countries is delayed child development, where around 250 million children under the age of 5 are at risk of not being able to achieve maximum development. According to Fadillah, one aspect that must be developed in children is rough motoric (Intan et al, 2020). And at the age of 0-5 years is a very important and influential phase in determining the growth and development of children. Rough motoric in children do not always develop optimally because of various disorders during their development. The purpose of this study was to analyze rough motoric development in children aged 1-3 years. Method The research design used is a descriptive survey. The research sample was 40 children using simple random sampling. Data analysis the data were analyzed using the frequency distribution of each variable. The results of the study showed that normal rough motoric development was 19 respondents (35.2%) and 21 respondents (38.9%). It is hoped that parents, especially mothers, will increase the provision of developmental stimulation so that children can develop optimally according to the age stage of the child's motor development.

**Keywords:** Rough Motoric Development, Children.

### INTRODUCTION

One of the main problems for middle- and low-income countries is delayed child development, where around 250 million children under the age of 5 are at risk of not being able to achieve maximum development. Research by Zhang J et al. in 2018 stated that more than 200 million children under five in the world were estimated to have cognitive and social emotional development disorders (BPS, 2020).

In Indonesia, the development of children can be seen through the achievements of the ECDI (Analysis of Early Childhood Development Index) in 2018 which shows that the results are relatively good with a score of 88.30, which means that more than 95% of children are of age and stages of development. Meanwhile, achievements in the development of numeracy literacy and social emotional abilities are still below 70% (BPS, 2020). Meanwhile, when viewed based on children's participation in preschool education (PAUD and the like) it shows that children who do not receive preschool education are higher than children who have and or are currently receiving preschool education (BPS, 2020).

Research in 2018 in Indonesia found that 29.9 percent of children under the age of 24 months experienced some form of stunting (Unicef, 2020). According to research by Kang Y *et al.* (2018) shows that there is a link between stunting and underweight with the achievement of learning ability development of children aged 36-59 months in the South Asian region (BPS, 2020).

According to Fadillah, one aspect that must be developed in children is rough motoric (Intan *et al.*, 2021). And at the age of 0-5 years is a very important and influential phase in determining the growth and development of children (Rukmini, 2019). Intan *et al.* (2021) assessed that rough motoric in children do not always develop optimally due to various disorders during their development.

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## MATERIAL AND METHODS

The research design used is a descriptive survey. This research was conducted in Renda Village, Towea District, Muna Regency. Data was collected through questionnaires and DDST observations on mothers and children totaling 40 people. The sample in this study was taken using a simple random sampling technique. Data processing was carried out using the SPSS version 21 computer program in the form of an analysis of the frequency distribution of each variable. Presentation of data is displayed in the form of tables and narratives.

## RESULTS AND DISCUSSION

### Characteristics of 1-3 Years Old Children by Age

**Table-1: Distribution of respondents by age of children in Renda Village, Towea District, Muna Regency, August 2021**

Number	Children age (Month)	Frequency (n)	Presentation (%)
1.	12-18	18	45,0%
2.	19-24	7	17,5%
3.	25-36	15	37,5%
	Total	40	100%

*Source: General data of respondents from Renda Village, Towea District, Muna Regency*

Based on table 1, it shows that there are 18 children (45.0%) aged 12-18 months, 7 children (17.5%) aged 19-24 months and 15 children (37.5%) aged 25-36 months.

### Characteristics of 1-3 Years Old Children by Gender

**Table-2: Distribution of Respondents by Gender of Children in Renda Village, Towea District, Muna Regency. In August 2021**

No.	sex	Frequency (n)	Presentation (%)
1.	Male	24	60,0%
2.	Female	16	40,0%
	Total	40	100%

*Source: General data of research respondents in Renda Village, Towea District, Muna Regency*

Based on table 2, it shows that most of the child respondents were male, namely 24 people (60%) while women were 16 people (40%).

### Characteristics of Mothers Based on Education

**Table-3: Distribution of Respondents Based on Mother's Education in Renda Village, Towea District, Muna Regency. In August 2021**

No.	Education	Frequency (n)	Presentation (%)
1.	elementary / middle school	31	77,5%
2.	High school	5	12,5%
3.	Collage	4	10,0%
	Total	40	100%

*Source: General data of respondents from Renda Village, Towea District, Muna Regency*

Based on table 3, it shows that there are 31 mothers (77.5%) with elementary / middle school education (SD / SMP), 5 people (12.5%) high school (SMA), and as many as 4 people (10%) have a college education.

### Motoric Development

The results of the analysis of motor development of children aged 1-3 years in Renda Village, Towea District, Muna Regency. In the form of a frequency distribution table.

**Table-4: Frequency distribution of motor development of children aged 1-3 years in Renda Village, Towea District, Muna Regency. In August 2021**

No	Motoric development	Frequency (n)	Presentation (%)
1.	Normal	19	35,2%
2.	Abnormal	21	38,9%
	Total	40	100,0%

**Source:** Data on respondents' DDST test examination in Renda Village, Towea District, Muna District

Based on table 4, it shows that the results of the study on 40 respondents aged 1-3 years were 19 children (35.2%) with normal motor development while abnormal motor development was 21 children (38.9%).

## DISCUSSION

### Rough Motoric Development of 1-3 Years Old Children

#### Normal rough motoric development

The results showed 19 children (35.2%) in normal rough motoric development. This research is in line with the opinion of Soetjningsih (2010) which explains that children's motoric development is influenced by several factors, namely genetic and environmental factors. Parents/family are environmental factors that first interact with children in developing the child's abilities by providing stimulation/stimulation. When children get a lot of directed stimulation, children will develop faster than children who get less stimulation. Giving this stimulation can be done since the prenatal period.

In another opinion, Soetjningsih (2012) children's motor development is very dependent on how much stimulation and encouragement is given. Because at this time the muscles of the child, both smooth and rough, have not yet reached maturity. So it takes exercises that will help children to control their muscle movements so as to achieve optimal developmental conditions. This is then marked by the child being able to complete developmental tasks according to his age. In addition, if the stimulation is done as early as possible, then the child's development will be better. Likewise with the amount of stimulation, which will make children's knowledge to be widely developed and children's development to be optimal.

The age of parents also participates in determining the provision of stimulation to children. Hurlock argues that the increase in a person's age will go hand in hand with the level of maturity and strength of parents both in thinking and working in providing stimulation to children. It is also said that the level of sensitivity and experience of children increases with age (Anggraini, 2017).

Furthermore, those who are involved in the optimal development of children according to Saputro and Talan (2017) are families. According to him, the family environment has an influence on the psychosocial development of children. Meanwhile, this is in line with the explanation of Setianingrum *et al.* (2017) that the role of parents in nurturing and fostering child development from an early age (0-5 years).

#### Abnormal rough motoric development

The results showed 21 children (38.9%) in abnormal gross motor development. According to Marischa (2015), in general children with abnormal growth and development are the result of interactions between children and their parents for the overall child development process. Because parents can immediately recognize abnormalities in their child's development process, and as early as possible such as providing knowledge on child development as a whole. In addition, it is also supported by various factors.

Among them are genetics, environment, mechanisms, toxins/chemicals, nutrition, child's relationship with family, stimulation, and APE. Stimulation has a fairly important bargaining value. According to Anggraini (2017), in the motor development of children who experience developmental disorders or delays, it means that motor development is below the normal age of the child. As a result, at a certain age, children do not master the expected developmental tasks so that children experience problems with movement and will also hinder access to external sources as well as emotional and intelligence regulation.

According to Hurlock (Anggraini, 2017) that there are 3 reasons a person's gender is important in child development. First, every month the child experiences an increase in the understanding of the behavior of parents, peers and the community which influences the development of attitudes and behaviors that are considered according to the gender of the individual. Third, the attitudes of parents and other family members with respect to their gender. The desire

to have children of a certain gender will affect the attitude of acceptance of parents and families towards children, which in turn will also affect their behavior and relationships with children.

In this study it was also found that most of the respondents worked, most of the respondents worked as housewives/not working as many as 34 people (85%), respondents who worked as private sector workers 1 person (2.5%), as entrepreneurs 2 people (5.0 %), and as civil servants as many as 3 people (7.5%). From this data, it can be seen that the amount of time between mothers and children is a good foundation in providing stimulation to children's motor development. Quality time is a determinant to meet good and optimal stimulation for children. Early stimulation is the key in children's motoric development.

This is then in line with the narrative of Notoatmojo (2010), most of the mothers who are not working will have a lot of time to take care of their children, and those who fall into the sufficient category are 2 (11.1%), less than 1 (5.6%). possibly influenced by the mother's occupation as a civil servant/private/entrepreneur.

In this study, it was found that most of the 40 mothers in Renda Village, Towea District, Muna Regency, there were 31 mothers (77.5%) with elementary/middle school education (SD/SMP), 5 (12.5%) education last school Middle school (SMA), as well as 4 people (10%) with a university education background. The next factor in providing parental stimulation to children is knowledge and education level (Anggraini, 2015). This is because the ability to absorb information and an advanced mindset is determined by a person's high level of education compared to a low level of education. In line with Marischa's research (2015) that it is important for parents to understand the various factors that influence child development, especially gross motor development for children aged 0-5 years by increasing their knowledge in providing stimulation. Because knowledge is a very important domain for the formation of actions and views or perceptions of parents on the importance of stimulation for rough motoric development of children under five.

Parents as the closest caregivers of a child must know more about the child's development process and the factors that influence it. Given the large role of parents in children's gross motor development, parental knowledge about stimulation is very necessary (Marischa, 2015).

## CONCLUSIONS AND SUGGESTIONS

Most children aged 1-3 years in the village of lace, sub-district of Towea, muna district, had abnormal gross motor development as many as 21 children (38.9%) and 19 children (35.2%) had normal gross motor development.

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