Jurnal Info Kesehatan
Vol. 20, No. 1, June 2022, pp.20-28
P-ISSN 0216-504X, E-ISSN 2620-536X
DOI: *10.31965/infokes.Vol20Iss1.618*
Journal homepage:*http://jurnal.poltekeskupang.ac.id/index.php/infokes*

RESEARCH **Open Access**

The Relationship of Mother's Role in Stimulation with Motor Development in Toddler

Suriani B[1a], Nurfatimah[2b*], Djuhadiah Saadong[1c], Subriah[1d], Kadar Ramadhan[2e]

[1] Department of Midwifery, Poltekkes Kemenkes Makassar, Makassar, South Sulawesi, Indonesia
[2] Department of Midwifery, Poltekkes Kemenkes Palu, Palu, Center Sulawesi, Indonesia

[a] Email address: suriani_b503@poltekkes-mks.ac.id
[b] Email address: nfatimahhh@gmail.com
[c] Email address: djuhadiahs020557@gmail.com
[d] Email address: subriah@poltekkes-mks.ac.id
[e] Email address: kadarlaure@gmail.com

Received: 5 December 2021 Revised: 9 April 2022 Accepted: 26 May 2022

Abstract
Toddler period is an important phase in the growth and development of children. The role of parents, especially mothers, is needed to help children develop motor skills so that children's development can be maximized. The objective of this study is to analyze the mother's role in stimulating the child's motor development. The research method is cross sectional. The population in this study were mothers who had children aged 1-3 years in the work area of the Mangasa Primary Health Center, Makassar, amounting to 45 people. The sample in this study was 45 people, taken with a saturated sampling technique or the total population. The statistical test used the chi square test. The results presented that 95.7% of mothers who played a role in stimulating children's motor development had children whose development was appropriate. The results of the chi square test obtained p value <0.001. The conclusion is that there is a relationship between mother's role in stimulation and the motor development of toddler. It is expected that the Primary Health Center or midwives will provide training to mothers about providing developmental stimulation so that mothers can independently assess their child's development and pay attention to their child's development according to age.

Keywords: Role of Mother, Stimulation, Motor Development.

Corresponding Author:

Nurfatimah
Department of Midwifery, Poltekkes Kemenkes Palu, Palu, Center Sulawesi, Indonesia.
Email: nfatimahhh@gmail.com

1. INTRODUCTION

Globally, 52.9 million children under 5 years (54% boys) had a developmental disability in 2016 compared to 53.0 million in 1990 (Olusanya et al., 2018). The 2018 World Health Organization report states that the prevalence of children under five with growth and development disorders is 28.7%, or more than 200 million children aged under 5 years in the world do not fulfill their development potential and most of them are children who live in Continent of Asia and Africa (Yunita, et al., 2020), and Indonesia is included in the third country with the highest prevalence in the Southeast Asia region (Rumahorbo et al., 2020). According to 2015 UNICEF data, it was found that the incidence of growth and development disorders in toddlers, especially motor development disorders (27.5%) or 3 million children were impaired. According to national data from the Indonesian Ministry of Health, 11.5% of Indonesian children under the age of five experience growth and development disorders (Kementerian Kesehatan Republik Indonesia, 2016).

Toddler period is a golden age, an important, sensitive, and critical period in which children grow and develop. At that age, children are in the process of self-formation to create a strong foundation for their growth and development. There are many ways parents can help their child develop fine and gross motor skills. If the various needs of children are ignored, the child is feared to experience less than optimal growth and development (Pregnancy Birth & Baby, 2020). At this time, the growth rate begins to decline and there is progress in motor development (Wauran, et al., 2016).

Growth and development begin at birth, so growth monitoring should begin as early as possible. Each child follows a general pattern of weight gain, where size and growth rate may vary. During this period, health and nutrition interventions must be performed optimally to ensure the survival and development of the child (Yuliana, 2006). Stimulation is an important condition for the growth and development of young children. Children who receive a lot of directional stimulation develop faster than those who receive less stimulation. Suryanto, et al., research (2011) shows that the role of parents in stimulating children's growth and development is proven to increase the developmental score of early childhood.

The role of parents, especially mothers, plays an important role in optimizing children's growth and development (Astarani & Werdiningsih, 2012; Labir et al., 2016). Parents should always provide stimulation to their children in terms of language development, general motor skills, social and fine motor skills which must be continuously stimulated with love, game methods and other methods on a regular basis.

Stimulation is significantly important for maximum child development. Children who receive a lot of directed stimulation will develop faster than children who do not (Labir et al, 2016). Children who are stimulated repeatedly and continuously in each development means that they have provided opportunities for children to become intelligent children, develop and grow optimally, independent, have normal emotions and are easy to adapt, because development requires stimulation, especially from the family (Maulina, et al., 2014) (Nurrahmi & Isfaizah, 2021).

The results of the researcher's preliminary study of most families with toddler in the work area of the Primary Health Center Mangasa showed that the knowledge, roles, and functions of families in providing stimulation were still low. Even mothers still do not understand the benefits and how to motivate toddlers (1-3 years). Child development that is not stimulated properly will result in impaired child development and have a very detrimental impact and hinder the birth of quality human resources in the future (Soetjiningsih & Ranuh, 2014). The objective of the study is to analyze the mother's role

in providing stimulation for children's motor development in toddler in the Mangasa Primary Health Center Work Area.

2. RESEARCH METHOD

This type of research is an analytic survey with a cross-sectional research design. The research was conducted in the Work Area of Mangasa Primary Health Center of Makassar from April to June 2021. The population in the study were all mothers who had toddlers aged 1-3 years as many as 45 people. Samples were taken using the total population.

The instruments used were the Prescreening Developmental Questionnaire (PDQ) for assessing children's motor development, and observation sheets to assess the mother's role in stimulating child development. Indicators of the mother's role in stimulating child development include; 1) gross motor skills which involve training children to stand alone, step and walk, bend over, kick a ball, climb stairs without assistance, jump, stand on one leg, teaching children to throw and catch a ball, introducing children to bicycles three, and 2) fine motor skills which teach children to arrange towers, pick up small objects such as beads, put objects in containers, give children pencils and paper for children to doodle, imitate vertical lines. The role of the mother is categorized into two, which are 1) role: if the mother plays a role in providing stimulation to the child's development, and 2) no role: if the mother does not play a role in providing stimulation to the child's development. Children's motor development is grouped into three comprising of 1) appropriate child development if the answer score is 9-10, 2) suspect child development if the answer score is 7-8, and 3) deviant child development if the answer score is < 6 (Kementerian Kesehatan Republik Indonesia, 2016). The research data were analyzed by Pearson Chi Square test with a significance value of $p<0.05$. The research data were analyzed by Pearson Chi Square test with a significance value of $p<0.05$. Ethical approval for this study was obtained from Health Research Ethics Committee Health Polytechnic Makassar with approval number: 0095/KEPK-PTKMKS/IV/2021.

3. RESULTS AND DISCUSSION

Table 1. Distribution of Characteristics of Research Respondents in the Work Area of the Mangasa Primary Health Center, Makassar (N=45).

Characteristics of Respondents	Category	n	%
Respondent's Age	<20 years old	5	11,1
	20-35 years old	32	71,1
	>35 years old	8	17,8
Level of education	Elementary School	4	8,9
	Junior High School	11	24,4
	Senior High School	18	40,0
	University	12	26,7
Occupation	Housewifes	33	73,3
	Working	12	26,7
Child Gender	Male	31	68,9
	Female	14	31,1

Characteristics of Respondents	**Category**	**n**	**%**
Child Age	24 months old	31	68,9
	30 months old	8	17,8
	36 months old	6	13,3
Total		45	100,0

Table 1 shows that most of the respondents were mothers aged 20-35 years as many as 32 people (71.1%), high school/vocational education as many as 18 people (40.0%), and not working as many as 33 people (73.3%). The gender of the most children is male with a total of 31 people (68.9%) with the most age 24 months, which are 31 people (68.9%).

Table 2. Distribution of Mother's Role in Stimulating Children's Motor Development in the Work Area of the Mangasa Primary Health Center, Makassar (N=45).

Mother's Role	**n**	**%**
Role	23	51,1
No role	22	48,9
Total	45	100,0

Table 2 shows that there are 23 mothers (51.1%) who play a role in stimulating the development of their children and 22 mothers who do not play a role in giving stimulation to their children (48.9%).

Table 3. Distribution of the Motoric Development of Toddlers in the Work Area of the Makassar Primary Health Center, Mangasa (N=45).

Motor Development	**n**	**%**
Appropriate	29	64,4
Suspect	12	26,7
Deviant	4	8,9
Total	45	100,0

Table 3 shows that the appropriate motor development of children is 29 people (64.4%), the child's motor development is suspect as many as 12 people (26.7%), and the motor development of children who deviates as much as 4 people (8.9%).

Table 4. Bivariate Analysis of Toddlers' Motor Development in the Work Area of the Mangasa Primary Health Center, Makassar (N=45).

Variable	**Child development**					
	Appropriate		**Suspect**		**Deviant**	
	n (29)	**% (64,4)**	**n (12)**	**% (26,7)**	**n (4)**	**% (8,9)**
Age						
<20 years old	3	60,0	2	40,0	0	0
20 – 35 years old	21	65,6	8	25,0	3	9,4
>35 years old	5	62,5	2	25,0	1	12,5
Education						
Elementary School	2	50,0	1	25,0	1	25,0
Junior High School	6	54,5	5	45,5	0	0,0
Senior High School	11	61,1	5	27,8	2	11,1

Variable	Child development					
	Appropriate		Suspect		Deviant	
	n (29)	% (64,4)	n (12)	% (26,7)	n (4)	% (8,9)
University	10	83,3	1	8,3	1	8,3
Occupation						
Housewifes	20	60,6	11	33,3	2	6,1
Working	9	75,0	1	8,3	2	16,7
Child gender						
Male	21	67,7	8	25,8	2	6,5
Female	8	57,1	4	28,6	2	14,3
Child Age						
24 months old	18	58,1	10	32,3	3	9,7
30 months old	5	62,5	2	25,0	1	12,5
36 months old	6	100,0	0	0,0	0	0,0

Table 4 shows that the majority of mothers aging 20-35 years, college education, working mothers, gender of males, and children aged 36 months have appropriate child development.

Table 5. The Relationship of Mother's Role in Stimulation of Motor Development in Toddler in the Work Area of the Mangasa Primary Health Center, Makassar (N=45)

Role	Child's Motor Development						Total		p-value
	Appropriate		Suspect		Deviant				
	n	%	n	%	n	%	N	%	
Role	22	95,7	1	4,3	0	0	23	100,0	<0,001
No role	7	31,8	11	50,0	4	18,2	22	100,0	
Total	29	64,4	12	26,7	4	8,9	45	100,0	

Table 5 shows that mothers who play a role in stimulation have 95.7% children with appropriate motor development status, while mothers who do not play a role in stimulation have 50.0% children with questionable motor development status and only 31.8% children with appropriate motor development status.

The results of the Pearson Chi Square statistical test obtained a p-value of <0.001, meaning that there is a significant relationship between the mother's role in stimulation and the motor development of toddler.

In this study, it was discovered that there was a relationship between the mother's role in providing stimulation and the motor development of toddler. Mothers have an important role in providing stimulation for their child's motor development. The better the stimulation given by the mother, the better the development experienced by the child (Ayuba, 2015; Nurrahmi & Isfaizah, 2021; Rukmini, 2019). The results of this study revealed that mothers who did not play a role in providing stimulation to children resulted in 4 children experiencing developmental deviations, 11 children suspect and only 7 children experiencing normal development.

The results of this study are in accordance with previous studies which showed that mothers who did not play a role in giving stimulation were able to have normal child development. It proves that there are other factors that can affect the development of fine and gross motor skills in children besides the stimulation provided by the mother (Ayuba, 2015), (Rukmini, 2019). Various factors that can cause inappropriate parenting include: knowledge, culture, environment, and family. Sufficient family knowledge about the child's development will be used by the family as a basis for proper treatment, including

by stimulating and early detection of developmental deviations (Namangdjabar & Saleh, 2020).

The results of the study also revealed that children whose development was appropriate because they had received early stimulation from their parents, especially mothers, were provided good parenting patterns and balanced nutritional intake. Meanwhile, children whose development deviates are because they are not given early stimulation by the mother and the mother's knowledge is minimal about the development of her child. Another study states that someone who has good knowledge about growth and development will lead to motivation and the importance of stimulation and early detection of growth and development in children under five so that the next generation does not experience growth and developmental delays (Namangdjabar & Saleh, 2020), (Yunita et al., 2020). The provision of health education regarding early detection of the development of children under five can increase the knowledge and skills of mothers in performing early detection of child development (Agustina & Betan, 2017).

The mother's role is very important in stimulating children, meaning that mothers provide exercises or games to stimulate children's motor development. If parents provide a fun stimulation pattern, then the child's motor development will be good (Santoso et al., 2020). The mother's role in development is very important because it is expected that child monitoring can be performed properly. Child development at an early age is really crucial because children will be able to adapt themselves to the environment (Labir et al., 2016; Maulina et al., 2014; Wahyuningsri, et al., 2017). Otherwise, if these developments experience problems, the child will have difficulty in the next learning stage.

Parents have an important role in the growth and development of their children, especially mothers (Entoh, et al., 2020). However, what happens in society in general is that many families become dual carrier families, where not only fathers work, but mothers are also busy working, so that the role of mothers in stimulating child development is different from that given by mothers who do not work (Labir et al., 2016).

This study discovered that the role of working mothers has children whose development is appropriate compared to mothers who do not work. It is not in accordance with several studies which show that mothers who do not work have a better role in providing stimulation to their children so that their development is appropriate (Dhingra & Keswani, 2019; Maulina et al., 2014). Other research shows that when mothers are able to balance work and family and are satisfied with their husband's help, the child's growth and development will be maximized (Handayani & Munawar, 2015). All policies that allow mothers to choose whether they will return to work or not should be encouraged, the ability to make choices that are appropriate for the individual who is important to women in one way or another will not enhance their child's development (Kühhirt & Klein, 2018). The need for parenting support from other people such as husbands is certainly very helpful for working mothers in performing their role in child development.

The implication in this study is that the motor development of a toddler is largely determined by the role of the mother. The support of all family members, especially fathers, is also very much needed. Previous research stated that father involvement in the process of early childhood care also gave positive results on children's motor development, including development in language. In some situations, there are also fathers who take on the role of single parent or stay-at-home fathers who conduct parenting activities while mothers work outside (Lerner, 2016; Parker & Wang, 2013; Yogman & Garfield, 2016). Monitoring children's motor development on a regular basis cannot be separated from the role of primary health unit cadres and midwives so that if a

child's development is suspect or deviant, it can be detected early (Namangdjabar & Saleh, 2020; Susanti & Sustini, 2017).

4. CONCLUSION

This study concludes that there is a relationship between the mother's role in providing stimulation with motor development in toddler. The better the role of the mother is, the more the motoric development of the child will be in accordance with his age. We suggest to the primary health center or midwives to provide training to mothers about providing developmental stimulation so that mothers can independently assess and pay attention to their child's development according to age.

REFERENCES

Agustina, A., & Betan, M. O. (2017). Pengaruh Pendidikan Kesehatan Tentang Deteksi Dini Perkembangan Anak Usia Balita Terhadap Peningkatan Pengetahuan dan Ketrampilan Ibu Dalam Melakukan Deteksi Dini Perkembangan Anak di Pusat Kesehatan Masyarakat Sikumana, Kota Kupang. *Jurnal Info Kesehatan*, *15*(1), 1–13. https://doi.org/10.31965/infokes.Vol15.Iss1.123

Astarani, K., & Werdiningsih, A. T. A. (2012). Role in Meeting the Needs of Mother on Child Development Preschoolers. *Jurnal Penelitian STIKES Kediri*, *5*(1), 82–98. Retrieved from https://ejournal.petra.ac.id/index.php/stikes/article/view/18471

Ayuba, N. (2015). *Hubungan Peran Ibu dalam Stimulasi Dini dengan Perkembangan Anak Usia Toddler di Desa Hutabohu Kecamatan Limboto Barat Kabupaten Gorontalo* (Universitas Negeri Gorontalo). *Skripsi*. Sarjana Keperawatan, Fakultas Ilmu-Ilmu Kesehatan dan Keolahragaan, Universitas Negeri Gorontalo.

Dhingra, V., & Keswani, S. (2019). Impact of Working and Non - Working Mothers on Development of their Children in Madhya Pradesh. *International Journal of Research in Advent Technology*, *7*(3), 1369–1375. https://doi.org/10.32622/ijrat.732019104

Entoh, C., Noya, F., & Ramadhan, K. (2020). Deteksi Perkembangan Anak Usia 3 Bulan – 72 Bulan Menggunakan Kuesioner Pra Skrining Perkembangan (KPSP). *Poltekita: Jurnal Pengabdian Masyarakat*, *1*(1), 8–14. https://doi.org/10.33860/pjpm.v1i1.72

Handayani, A., & Munawar, M. (2015). Work Family Balanced and Quality of Parenting in Optimizing Children Development. *Indonesian Journal of Early Childhood Education Studies*, *3*(1), 11–18. https://doi.org/10.15294/ijeces.v4i1.9447

Kementerian Kesehatan Republik Indonesia. (2016). *Pedoman Pelaksanaan: Stimulasi, Deteksi dan Intervensi Dini Tumbuh Kembang Anak di Tingkat Pelayanan Kesehatan Dasar*. Jakarta: Kementerian Kesehatan Republik Indonesia.

Kühhirt, M., & Klein, M. (2018). Early Maternal Employment and Children's Vocabulary and Inductive Reasoning Ability: A Dynamic Approach. *Child Development*, *89*(2), e91–e106. https://doi.org/10.1111/cdev.12796

Labir, I. K., Sulisnadewi, N. L. K., & Sumirta, I. N. (2016). Peran Ibu Dalam Menstimulasi Dengan Perkembangan Anak di Posyandu. *Jurnal Gema Keperawatan*, *9*(1), 22–27.

Lerner, C. (2016). The Daddy Factor: The Crucial Impact of Fathers on Young Children's Development. Washington: Zero to Three. Retrieved from https://www.zerotothree.org/resources/341-the-daddy-factor-the-crucial-impact-of-fathers-on-young-children-s-development#:~:text=Fathers who care for%2C nurture,builds vocabulary and conversational skills.

Maulina, E. I. N., Makhfudli, M., & Ulfiana, E. (2019). Perbedaan Peran Ibu Dalam

Stimulasi Perkembangan Anak Usia Prasekolah Pada Ibu Bekerja Dan Tidak Bekerja Di Wilayah Kerja Puskesmas Banyu Urip Surabaya. Indonesian Journal of Community Health Nursing, 3(1). Retrieved from https://e-journal.unair.ac.id/IJCHN/article/view/12209

Namangdjabar, O. L., & Shaleh, U. K. S. (2020). Stimulation, Detection, and Early Intervention of Growth of Children Aged 1-5 Years Old for Healthcare Center's Cadre and Parents at Kenarilang Health Center, Alor. *EAS Journal of Nursing and Midwifery*, *2*(6), 367–363. https://doi.org/10.36349/easjnm.2020.v02i06.006

Nurrahmi, S., & Isfaizah, I. (2021). Pemberian Stimulasi Oleh Ibu Berhubungan dengan Perkembangan Anak Usia 1-3 Tahun di Wilayah Kerja Bidan Desa Kertaharja. *Journal of Holistics and Health Science*, *3*(2), 246–255. https://doi.org/10.35473/jhhs.v3i2.104

Olusanya, B. O., Davis, A. C., Wertlieb, D., Boo, N.-Y., Nair, M. K. C., Halpern, R., … Kassebaum, N. J. (2018). Developmental disabilities among children younger than 5 years in 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet Global Health*, *6*(10), e1100–e1121. https://doi.org/10.1016/S2214-109X(18)30309-7

Parker, K., & Wang, W. (2013). Modern Parenthood: Roles of Moms and Dads Converge as They Balance Work and Family. *Pew Research Center's Social & Demographic Trends Project*.

Pregnancy Birth & Baby. (2020). Toddler development: Motor skills. Retrieved from https://www.pregnancybirthbaby.org.au/toddler-development-motor-skills

Rukmini. (2019). Pemberian Stimulasi dan Perkembangan Motorik Anak Usia 1-3 tahun di Kelurahan Krembangan Kecamatan Morokrembangan Surabaya. *Jurnal Ners Lentera*, *7*(1), 45–52. Retrieved from http://journal.wima.ac.id/index.php/NERS/article/view/2493/0

Rumahorbo, R. M., Syamsiah, N., & Mirah. (2020). Faktor-faktor Yang mempenegaruhi tumbuh kembang balita di Wilayah Kerja Puskesmas Pancur Batu Kabupaten Deli. *Chmk Health Journal*, *4*(2), 158–165. Retrieved from http://cyber-chmk.net/ojs/index.php/kesehatan/article/view/795

Santoso, Y. D., Efendi, F., Kurnia, I. D., Susanti, I. A., Pramono, A. P., & Habibie, A. N. (2020). The Correlation Between Parental Stimulation and Motor Development in Stunted Toddlers. *International Journal of Psychosocial Rehabilitation*, *24*(7), 9134–9139. Retrieved from https://www.psychosocial.com/article/PR270905/19282/.

Soetjiningsih, & Ranuh, I. N. G. (2014). *Tumbuh Kembang Anak*. Jakarta: EGC.

Suryanto, S., Purwandari, H., & Mulyono, W. A. (2014). Dukungan keluarga dan sosial dalam pertumbuhan dan perkembangan personal sosial, bahasa dan motorik pada balita di kabupaten Banyumas. *KEMAS: Jurnal Kesehatan Masyarakat*, *10*(1), 103-109. Retrieved from https://journal.unnes.ac.id/nju/index.php/kemas/article/view/3076/3093

Susanti, D., & Sustini, F. (2017). Implementation on Stimulation, Detection, and Early Intervention of Child Growth and Development (Sdidtk) Program in Puskesmas Mojo, Surabaya Still Emphasize on Growth Screening. *Folia Medica Indonesiana*, *52(1), 51–56. https://doi.org/10.20473/fmi.v52i1.5209*

Wahyuningsri, W., Yudiernawati, A., & Meylia, M. (2017). Stimulasi Perkembangan Motorik Halus Pada Anak Todler. *Journal of Applied Nursing (Jurnal Keperawatan Terapan)*, *3*(1), 50–55. https://doi.org/10.31290/jkt.v(3)i(1)y(2017).page:50-55

Wauran, C. G., Kundre, R., & Silolonga, W. (2016). Hubungan Status Gizi dengan

Perkembangan Motorik Kasar pada Anak Usia 1-3 Tahun di Kelurahan Bitung Kecamatan Amurang Kabupaten Minahasa Selatan. *Jurnal Keperawatan*, *4*(2), 1–7. Retrieved from https://ejournal.unsrat.ac.id/index.php/jkp/article/view/12914/12501

Yogman, M., & Garfield, C. F. (2016). Fathers Roles in the Care and Development of Their Children: The Role of Pediatricians. *American Academy of Pediatrics*, *138*(1), 1–17. https://doi.org/10.1542/peds.2016-1128

Yuliana. (2006). Pola pertumbuhan anak usia 1-5 tahun di wilayah Bogor. Skripsi. Bogor: Institut Pertanian Bogor. Retrieved from https://repository.ipb.ac.id/handle/123456789/46151

Yunita, D., Luthfi, A., & Erlinawati, E. (2020). Hubungan Pemberian Stimulasi Dini Dengan Perkembangan Motorik Pada Balita Di Desa Tanjung Berulak Wilayah Kerja Puskesmas Kampar Tahun 2019. *Jurnal Kesehatan Tambusai*, *1*(2), 61–68. Retrieved from https://journal.universitaspahlawan.ac.id/index.php/jkt/article/view/1106/889