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Early childhood cognitive stimulation from working and non-working mothers

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ABSTRACT

This article reports on the results of an in-depth analysis of the intentional daily behavior performed by mothers in facilitating the cognitive development of a child under five years old. This study employed a descriptive design. It involved 147 (72 working and 75 non-working mothers) selected using the purposive sampling technique (non-probability sampling). Research data were gathered using a questionnaire. The questionnaire contained two major components that evaluated a mother's presence as the designer of the home environment (two indicators) and cognitive stimulation provided by a mother at home (six indicators). The collected data were analyzed with descriptive statistics using the Microsoft Excel 16.10 version application. The results suggest that employment status does not influence a mother's presence as the designer of the home environment. In other words, working and non-working mothers have provided the best home environment for their child's cognitive development. However, regarding the fulfillment of the child's cognitive development needs, non-working mothers.

Keywords: cognitive stimulation, mother's role, education for parents, career woman

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INTRODUCTION

The first five years of a child's life are fundamental to physical, cognitive, social, and emotional development. The environment influences a child's growth although it is frequently associated with other factors such as organisms, physiological conditions, and genes. Some researchers have investigated these factors systematically, see for example Caçola, Gabbard, Montebello, & Santos (2015) concluded that among these factors, the home environment could be considered the main agent to support a child in building a foundation of lifelong patterns of behavior. Chen et al. (2016) points out that a favorable parenting environment positively impacts a child's behavioral issues in the next three years of his life. Additionally, Ronfani et al. (2015) found that the home environment was crucial in supporting a child's cognitive, language, and motoric development. Moreover, Wang, Hwang, Liao, Chen, & Hsieh (2011) reveal that the quality of a home environment can significantly affect the intrinsic motivation of a 2-or 3-year-old to explore their surroundings. Also, Pereira et al. (2016) suggest that a full-of-stimulation environment can minimize the vulnerability of development, but a lack-of-stimulation environment has the potential to delay child development. Home environment, thus, is a significant predictor of the success of cognitive development in childhood.

Based on the empirical evidence presented earlier, a conceptual framework can be organized to emphasize that a modification for a better home environment in the early years of a child's life could impact the child's cognitive development. This conceptual framework requires parents to prepare a home environment that can facilitate their child's cognitive development and provide adequate cognitive stimulation (Barreto, Sánchez de Miguel, Ibarluzea, Andiarena, &

Arranz, 2017; Jeon, Peterson, & DeCoster, 2013; Kwaśniewska, Gralewski, Witkowska, Kostrzewska, & Lebuda, 2018).

A child's early interaction with the home environment is established through utilizing all his senses, such as sight, touch, smell, hearing, and taste. This interaction highly depends on the combination of the child's multisensory experiences and the complexity of the home environment in the form of the availability of resources to play and learn. Therefore, providing play materials at home, the mother's presence and adequate stimulation are important indicators of a supportive home environment. Recent findings by Dauch et al. (2018) indicate that an individual's influence, sensory and other objects stimulation, playing room flexibility, and safety are the principal aspects that must be present in a home environment. The environment should be able to allow the child to familiarize himself with their surroundings and have fun within reasonable limits and let the child explore new spaces. A home environment should also contain features that help maintain the child's attention span, reduce his addiction to too much playing, and reinforce other people's guidance.

Overall, the empirical and theoretical proof presented above shows that the stimulation provided by parents at home can positively optimize a child's cognitive development. Stimulation here is not limited to the transfer of knowledge only but providing activities that can help children to develop basic competencies, such as the ability to explore, understand information, make an inference, coordinate balance, solve problems, calculate numbers, and comprehend the shape and size of an object (Brooks, 2011; Khadijah, 2016; Ministry of Education, 2007).

A vague description of many studies published in relation to the mother's supportive role in a family context such as presented in the previous sections has proven that advanced encouragement provided by parents at home can facilitate a child's development. Thus, it is crucial to examine mothers' daily behavior, particularly that of mothers working outside the house, which helps prepare a home environment full of adequate cognitive stimulation and promotes a child's cognitive development. Studies conducted on this topic are becoming more significant. According to Suardi (2017) and Suardi et al (2019), an ideal picture expected from an Indonesian family to provide positive stimulation that is advantageous for the child's cognitive development cannot be fully realized due to parents' lack of knowledge. In line with Iswarati (2010) who conducted a study in 33 provinces in Indonesia, Indonesian families were reported to have poor comprehension of parenting and child growth patterns. Moreover, the results of the study conducted by Putri (2012) in a village in Indonesia indicated that some parents assumed that a child could develop by himself; therefore, stimulation was not necessary. These empirical facts are a belief that has generally evolved in Indonesian societies which says that parents need to treat their children like their parents treated them as a child (Lestari, 2014).

These facts indicate that parents, especially mothers have not based their behavior in facilitating their child's cognitive development on practical knowledge. As a result, the stimulation provided for children at home is very limited. Moreover, World Bank (2013) reported that non-explicit interventions given by working parents in 50 regencies in Indonesia resulted in an invisible improvement in childcare practices at home. Therefore, it is imperative to design actions that can interfere with the ability of parents, particularly mothers to provide cognitive stimulation for children at home.

Based on the explanation above, the current study would present an in-depth analysis of intentional daily behavior performed by mothers in facilitating their child's cognitive development. This study was expected to provide insight as a preliminary study underlying the development of a child stimulation intervention model. Up until now, only a few studies revealed mothers' activities in facilitating the cognitive development of children under five years of age. Therefore, in a more specific way, this study aimed to answer the following questions: 1) How was the mother's presence as the designer of the home environment? 2) How did a mother provide auditory stimulation at home? 3) How did a mother provide visual stimulation at home? 4) How did a mother provide kinesthetic stimulation at home? 5) How did a mother provide tactile stimulation at home? 6) How did a mother provide arithmetic stimulation at home? 7) How did a mother provide geometry stimulation at home?

METHOD

This study This research employed a descriptive quantitative design. A descriptive quantitative study uses numbers to explain a phenomenon, describe the characteristics of an individual or a group, and evaluate observable conditions (Syamsuddin & Muhiddin, 2011). The phenomenon discussed in this study was associated with a mother's presence as the designer of the home environment. The provision of cognitive stimulation was observed, evaluated, and converted into mean, median, and mode. These numbers were then put into predetermined categories according to the specified range.

The study involved 147 mothers (72 working and 75 non-working mothers/housewives). The determination of the research samples was based on non-probability sampling. The criteria for selecting the samples were that all participants had to: (1) age between 22-43 years old; (2) have a child aged between 2-5 years old; (3) be university graduates; and (4) live in Makassar, Indonesia. Some respondents who were eliminated from the study sample group had the following criteria: (1) living together with other family members; (2) using childcare services; (3) hiring professional babysitters; and (4) being unwilling to provide the necessary information.

Before collecting the data to explain the phenomena, an instrument was developed through a series of activities, (1) determining the indicators and sub-indicators of the mother's presence as the designer of the home environment; (2) selecting the indicators and sub-indicators of the implementation of cognitive stimulation at home, and (3) testing the validity of the instrument.

The indicators and sub-indicators of the mother's presence as the designer of the home environment were decided by referring to the theories and research findings found in Black et al. (2017); Brooks (2011); Dauch et al. (2018); Iltus (2007). The settlement of the indicators and sub-indicators of implementing cognitive stimulation at home was based on the theories and research findings (Brooks, 2011; Khadijah, 2016; Ministry of Education, 2007).

Content validity was examined through a consultative interview conducted with a child development expert and an early childhood education specialist, followed by revising the instrument draft. The revised draft, which had passed the expert judgment, was then tried out on a group of mothers who had a child aged between 0-5 years old. The one-on-one tryout test was conducted to measure the validity and practicality of the instrument. The final product for the test was used as the data collection tool for this research.

The instrument used to collect the research data was a questionnaire comprising two components.

First, a mother's presence as the designer of the home environment was measured through two indicators: (1) the availability of the playing tools/features at home. The sub-indicators included: the child is taken outdoors; the child has children's books; the child has toys that can be hugged; the child has a role-playing toy; the child has a breakfast/lunch/dinner with the parents; the child has a toy to study colors; the child has a toy to study sizes; the child has a toy to study shapes; the child has a toy to practice hand moves; the child has a toy to freely express himself (crayon, etc.); the child is given a chance to speak; the child is allowed to choose his toys to play with; the playground is safe. (2) Mother's involvement with sub-indicators: mother talks to the child; the mother does not limit the child; mother helps the child to learn numbers; mother helps the child to learn the alphabet; mother helps the child to learn colors; mother helps the child to learn shapes; mother helps the child to learn shapes; mother answers the child's questions verbally; mother reads for the child; mother spends time with the child; mother helps the child to learn about animals through books; mothers helps the child to greet, apologize, and thank other people; mother always has nice words to say; mother carries the child in her arms; mother responds the child's babble; mother praises the child spontaneously; mother kisses, caresses, and hugs the child (Black et al., 2017; Brooks, 2011; Dauch et al., 2018; Iltus, 2007).

Second, cognitive stimulation provided by a mother at home was measured through six indicators as follows (1) Auditory, the sub-indicators were: resonate words pronunciation; encourage the child to imitate sounds that are heard daily; play a song; give simple oral commands; encourage the child to follow simple oral instructions; read a story; and follow rhythm by clapping hands. (2) Visual, with sub-indicators: introduce objects around the child; encourage

the child to recognize objects from their size; encourage the child to recognize objects from their form; and encourage children to recognize objects from their color. (3) Kinesthetic, the sub-indicators were to facilitate the child to tear the newsprint, create shapes with beams, trace a circle, trace a square, hold a pencil, and paint with fingers. (4) Tactile, with sub-indicators: facilitate the child to play in a sandbox; facilitate the child to play with water; facilitate the child to squeeze paper; and facilitate the child to grab the grain. (5) Arithmetic, the sub-indicators were recognizing or counting numbers; encouraging children to call the order of numbers; and encouraging the child to count objects. (6) Geometry, with sub-indicators: encourage the child to choose objects by color; encourage the child to choose objects by shape; encourage the child to choose objects by size; encourage the child to match objects by color; encourage the child to match objects by shape; and encourage the child to match objects by size (Brooks, 2011; Khadijah, 2016; Ministry of Education, 2007).

Table 1. Criteria based on the interval range

Components/Indicators	Range			Category
Environmental features	13	≤x≤	22,75	Tend to be very low
	22,75	<x≤	32,50	Tend to be low
	32,50	<x≤	42,25	Tend to be high
	42,25	<x≤	52	Tend to be very high
Mother's involvement	17	≤x≤	29,75	Tend to be very low
	29,75	<x≤	42,50	Tend to be low
	42,50	<x≤	55,25	Tend to be high
	55,25	<x≤	68	Tend to be very high
Cognitive stimulation/Auditory	7	≤x≤	12,25	Tend to be very low
	12,25	<x≤	17,50	Tend to be low
	17,50	<x≤	22,75	Tend to be high
	22,75	<x≤	28	Tend to be very high
Cognitive stimulation/ Visual and Tactile	4	≤x≤	7	Tend to be very low
	7	<x≤	10	Tend to be low
	10	<x≤	13	Tend to be high
	13	<x≤	16	Tend to be very high
Cognitive stimulation /Kinesthetic and Geometry	6	≤x≤	10,50	Tend to be very low
	10,50	<x≤	15,00	Tend to be low
	15,00	<x≤	19,50	Tend to be high
	19,50	<x≤	24	Tend to be very high
Cognitive stimulation/ Arithmetic	3	≤x≤	5,25	Tend to be very low
	5,25	<x≤	7,50	Tend to be low
	7,50	<x≤	9,75	Tend to be high
	9,75	<x≤	12	Tend to be very high

Table 2. Criteria of item analysis (sub-indicators)

Range			Criteria of implementation
1	≤x≤	1,75	Tend to be very low
1,75	<x≤	2,50	Tend to be low
2,50	<x≤	3,25	Tend to be high
3,25	<x≤	4	Tend to be very high

All collected data were analyzed with descriptive statistics using the Microsoft Excel version 16.10 application. The analysis results were put in one of the criteria of the range predetermined based on the number of the items asked by the respondents, as presented in Table 1. To deeply investigate the implementation of child cognitive stimulation, an item analysis was conducted, and the results were established in one of the criteria based on the predetermined range, such as described in Table 2.

FINDING AND DISCUSSION

Finding

A mother's presence as the designer of the home environment

A mother's presence as the designer of the home environment was examined from the availability of playing tools/features provided at home and the mother's involvement in supporting the child's cognitive development. Findings suggest that the involvement of both working and non-working mothers in providing playing tools/features tends to be high (mean ranged between 32,50 <x≤ 42,25). Similarly, the mother's involvement could be categorized into the "tend to be high" category (mean ranged between 42,50 <x≤ 55,25). Detailed information regarding these findings is displayed in Table 3.

Table 3. Mother's presence as the designer of the environment

	The provision of playing tools/features		Mother's involvement	
	working	non-working	working	non-working
Mean	39,42	40,49	54,83	54,99
Standard Error	0,58	0,71	0,67	0,82
Median	40	40	55	55
Mode	45	39	61	65
Standard Deviation	4,94	6,15	5,70	7,11
Sample Variance	24,39	37,87	32,45	50,61
Kurtosis	0,22	-0,83	-0,96	-1,11
Skewness	-0,41	-0,24	-0,05	-0,10
Range	24	23	23	23
Minimum	26	27	45	42
Maximum	50	50	68	65
Sum	2838	3037	3948	4124
Count	72	75	72	75

Working mothers in the "weak category" are reported to be less permissive than non-working mothers. They do not provide many opportunities for their children to pick their toys and they do not read to their kids. Similarly, the "weak category" of non-working mothers is also more restrictive and provides only a few chances for their children to select the toys.

Auditory stimulation provided by a mother at home

Auditory stimulation can develop basic competencies that influence children's cognitive development. Auditory stimulation provided by working mothers was categorized low (mean ranged between 12,25 <x≤ 17,50), while auditory stimulation provided by non-working mothers was considered high (mean ranged between 17,50 <x≤ 22,75). The results in detail are explained in Table 4.

Table 4. Auditory stimulation provided by a mother at home

	Auditory	
	working	non-working
Mean	17,44	19,67
Standard Error	0,16	0,27
Median	17	20
Mode	17	20
Standard Deviation	1,35	2,33
Sample Variance	1,83	5,44
Kurtosis	0,09	-0,12
Skewness	0,30	0,38
Range	7	10
Minimum	14	16
Maximum	21	26
Sum	1256	1475
Count	72	75

The results of the sub-indicator analysis show that non-working mothers are more able to facilitate the fulfillment of the child's auditory needs in his cognitive development process than working mothers. Even, the average value of "low" sub-indicators of the working mothers is lower than that of the non-working mothers. More detailed information is described in Table 5.

Table 5. Auditory stimulation by a mother

Sub-indicators	Working		Non-working	
	mean	category	mean	category
Resonate words pronunciation	3,28	Very High	3,65	Very High
Encourage the child to imitate sounds that are heard daily	2,03	Low	2,29	Low
Play a song	2,44	Low	2,64	High
Give simple oral commands	2,39	Low	2,79	High
Encourage the child to follow simple oral instructions	2,64	High	2,63	High
Read a story	2,28	Low	2,87	High
Follow the rhythm by clapping your hands	2,39	Low	2,80	High

Visual stimulation provided by a mother at home

Visual stimulation includes all activities related to children's sight, observation, attention, response, and perception. Low visual stimulation was reported by working mothers (mean ranged between $7 < x \leq 10$), while high visual stimulation was found in non-working mothers (mean ranged between $10 < x \leq 13$). The results in detail are explained in Table 6.

Table 6. Visual stimulation provided by a mother at home

	Visual	
	working	non-working
Mean	9,47	10,56
Standard Error	0,21	0,28
Median	9	11
Mode	9	12
Standard Deviation	1,76	2,38
Sample Variance	3,10	5,68
Kurtosis	1,21	0,13
Skewness	0,06	-0,53
Range	10	11
Minimum	5	5
Maximum	15	16
Sum	682	792
Count	72	75

The results of the sub-indicator analysis show that visual stimulation provided by working mothers has not been able to facilitate the child's visual needs required in his cognitive development. On the other hand, non-working mothers can provide dominant visual stimulation that facilitates the aspects the child needs to support his cognitive development. More detailed information is described in Table 7.

Table 7. Visual stimulation by a mother

Sub-indicators	Working		Non-working	
	mean	category	mean	category
Introduce objects around the child	2,31	Low	2,81	High
Encourage the child to recognize objects by their size	2,47	Low	2,69	High
Encourage the child to recognize objects by their shape	2,39	Low	2,45	Low
Encourage the child to recognize objects from their color	2,31	Low	2,60	High

Kinesthetic stimulation provided by a mother at home

Kinesthetic stimulation is associated with children's ability to coordinate moves and balance which can also affect their cognitive development. The research showed that working and

non-working mothers provided little kinesthetic stimulation at home (mean ranged between 10,50 <x≤ 15). The results in detail are explained in Table 8.

Table 8. Kinesthetic stimulation provided by a mother at home

	Kinesthetic	
	working	non-working
Mean	12,97	14,12
Standard Error	0,27	0,45
Median	13	13
Mode	14	13
Standard Deviation	2,27	3,88
Sample Variance	5,15	15,05
Kurtosis	1,32	-0,88
Skewness	-0,15	0,16
Range	13	15
Minimum	6	7
Maximum	19	22
Sum	934	1059
Count	72	75

The results of the sub-indicator analysis show that kinesthetic stimulation both from working-and non-working mothers are nearly the same (categorized as low). Still, the average score of working mothers is lower than that of non-working mothers. This finding shows that fulfilling a child's kinesthetic development needs for his cognitive process from working or non-working mothers is inadequate. More detailed information is described in Table 9.

Table 9. Kinesthetic stimulation by a mother

Sub-Indicators	Working		Non-working	
	mean	category	mean	category
Facilitate the child to tear the newsprint	1,92	Low	1,99	Low
Create shapes with beams	2,24	Low	2,44	Low
Trace a circle	2,26	Low	2,40	Low
Trace a square	2,19	Low	2,24	Low
Hold a pencil	2,35	Low	2,67	High
Paint with fingers	2,01	Low	2,39	Low

Tactile stimulation provided by a mother at home

Tactile stimulation includes all activities that develop children's basic cognitive competencies needed in a problem-solving process. Tactile stimulation provided by both working and non-working mothers, based on the research findings, was likely to be low (mean ranged between 7 <x≤ 10). The results in detail are explained in Table 10.

Table 10. Tactile stimulation provided by a mother at home

	Tactile	
	working	non-working
Mean	7,07	7,35
Standard Error	0,24	0,24
Median	7	8
Mode	7	6
Standard Deviation	2,08	2,12
Sample Variance	4,32	4,50
Kurtosis	-0,21	-1,06
Skewness	0,43	0,04
Range	8	7
Minimum	4	4
Maximum	12	11
Sum	509	551
Count	72	75

The results of the sub-indicator analysis show that tactile stimulation from working or non-working mothers has not facilitated all the needs for the child's tactile development to be required for the child's cognitive growth. This finding suggests that the fulfillment of a child's tactile development needs for his cognitive process from working or non-working mothers is inadequate. More detailed information is described in Table 11.

Table 11. Tactile stimulation by a mother

Sub-indicators	Working		Non-working	
	mean	category	mean	category
Facilitate the child to play in a sandbox	1,44	Very Low	1,63	Very Low
Facilitate the child to play with water	1,90	Low	1,89	Low
Facilitate the child to squeeze the paper	1,65	Very low	1,92	Low
Facilitate the child to grab the grain	2,07	Low	1,91	Low

Arithmetic stimulation provided by a mother at home

Arithmetic stimulation is associated with the ability of children to count numbers. Working mothers reported lower arithmetic stimulation (mean ranged between 7 <x≤10) compared to non-working mothers who could provide higher arithmetic stimulation (mean ranged between 7,50<x≤ 9,75). The results in detail are explained in Table 12.

Table 12. Arithmetic stimulation provided by a mother at home

	Arithmetic	
	working	non-working
Mean	6,93	8,53
Standard Error	0,13	0,22
Median	7	8
Mode	7	7
Standard Deviation	1,13	1,86
Sample Variance	1,28	3,47
Kurtosis	-0,72	-1,12
Skewness	0,02	0,18
Range	4	7
Minimum	5	5
Maximum	9	12
Sum	499	640
Count	72	75

The results of the sub-indicator analysis show that non-working mothers are more able to accommodate the fulfillment of child arithmetic needs required for the child's cognitive development compared to working mothers. However, based on the average score identified, working mothers' stimulation is still much lower than non-working mothers' stimulation. More detailed information is described in Table 13.

Table 13. Arithmetic stimulation by a mother

Sub-indicators	Working		Non-working	
	mean	category	mean	category
Recognize or count numbers	1,74	Very low	2,88	High
Encourage children to call the order of numbers	2,60	High	2,77	High
Encourage the child to count objects	2,60	High	2,88	High

Geometry stimulation provided by a mother at home

Geometry stimulation comprises activities that develop children's ability to recognize shapes and sizes. Geometry stimulation provided by working mothers could be categorized into the "tend to be low" category (mean ranged between 10,50v<x≤15). In contrast, geometry stimulation provided by non-working mothers tended to be high (mean ranged between 15<x≤19,50). The results in detail are explained in Table 14.

Table 14. Geometry stimulation provided by a mother at home

	Geometry	
	working	non-working
Mean	14,10	15,28
Std. Error	0,27	0,43
Median	14	15
Mode	14	11
Std Deviation	2,28	3,73
Sample V.	5,19	13,88
Kurtosis	-0,28	-0,59
Skewness	-0,37	0,65
Range	9	14
Minimum	9	10
Maximum	18	24
Sum	1015	1146
Count	72	75

The results of the sub-indicator analysis show that geometry stimulation from working and non-working mothers has not completely facilitated the child's geometry development needs required for his cognitive growth processes. Nevertheless, geometry stimulation from non-working mothers is more dominantly complete than from non-working mothers. More detailed information is described in Table 15.

Table 15. Geometry stimulation

Sub-indicators	Working		Non-working	
	mean	category	mean	category
Encourage the child to choose objects by color	2,54	High	2,71	High
Encourage the child to choose objects by shape	2,36	Low	2,28	Low
Encourage the child to choose objects by size	2,38	Low	2,71	High
Encourage the child to match objects by color	2,40	Low	2,72	High
Encourage the child to match objects by shape	2,13	Low	2,41	Low
Encourage the child to match objects by size	2,29	Low	2,45	Low

Discussion

The analysis results in Table 3 show that employment status does not affect a mother's presence as the designer of the home environment. This finding suggests that despite their limited time at home, working mothers can still position themselves as the designer of the home environment, not much different from mothers who stay at home, especially regarding the provision of playing tools. Therefore, it can be said that both working and non-working mothers have prepared a homely environment required for the child's cognitive development. It also indicates that the presence of the mother as the designer of the home environment can support the child's cognitive growth.

The mother's presence allows the child to optimize the realization of his cognitive development potential in the first five years of life. As suggested by Barreto et al. (2017) the quality of mother-child interactions can determine the success of a child's cognitive growth. Brooks (2011) also points out that it is important to provide enough toys and opportunities for a child to play with because toys are objects that can be used to explore and learn about the world. The availability of role-playing toys can improve a child's language skills and social understanding. Reading books to the child can enrich his vocabulary and improve his cognitive ability. Parents' involvement during children playing followed by consistent language/verbal use will give some long-term cognitive and emotional benefits for the child.

However, the results of this research indicate that both working and non-working mothers do not allow their children to pick their toys. In other words, those mothers are very restrictive. Working mothers do not even read for their children. At the same time, Iltus (2007) suggests that a supportive home environment would provide children with adequate reading materials, children's books, and parents' involvement in the reading activity. This environment should also

contain pictures and art equipment, playing tools, or home toys carved by the parents or the older sister/brother. Parents should be attentive and sensitive toward their children's playing process since this process will encourage them to explore and improve their problem-solving skills. Parents should use language more and speak to their children using different words daily. Furthermore, Dauch et al. (2018) an environment that supports child development at home requires the presence or the involvement of a mother.

The cognitive stimulation provided by working mothers was less diverse than that of non-working mothers (83.33% or 25 out of 30 sub-indicators of lack of cognitive stimulation were facilitated by working mothers, and 46.67% or 14 of 30 lack of cognitive stimulation was facilitated by non-working mothers). Both working and non-working mothers, however, did not provide enough kinesthetic and tactile stimulation. Kinesthetic stimulation is very important in facilitating the development of children's basic competencies in coordinating body balance. Since the response of the brain rules movement, kinesthetic stimulation will play an important role in stimulating the brain cells that contribute to the development of children's cognitive potential. Tactile stimulation, on the other hand, is very important in facilitating the development of children's abilities to solve problems (Khadijah, 2016).

The dominant cognitive stimulation provided by working mothers includes (1) resonating words pronunciation; (2) encouraging children to follow simple oral instructions; (3) encouraging children to call the order of numbers; (4) encouraging children to count objects; and (5) encouraging children to choose objects by color. On the other hand, the dominant cognitive stimulation provided by non-working mothers includes (1) resonating words pronunciation; (2) playing a song; (3) giving simple oral commands; (4) encouraging the child to follow simple oral instructions; (5) reading a story; (6) following rhythm by clapping hands; (7) introducing objects around children; (8) encouraging children to recognize objects from their size; (9) encouraging children to recognize objects from their color; (10) to hold a pencil; (11) to recognize or count numbers; (12) encouraging children to call the order of numbers; (13) encouraging children to count objects; (14) encouraging children to choose objects by color; (15) encouraging children to choose objects by size; and (16) encouraging children to match objects by color.

This finding suggests that stimulation to assist children in completing their cognitive development tasks is not maximal. In child development, a home environment equipped with adequate stimulation is an important factor. Piaget's cognitive development theory proposes that in the first five years of life, a child develops his cognitive ability through sensory and motor explorations (Dauch et al., 2018). Thus, the availability of toys that can facilitate the child's sensory and motor explorations and parents' active participation can be helpful for the child's cognitive development. It is also explained that children acquire knowledge when they explore, manipulate, and imitate their surroundings. As suggested by Black et al. (2017) low-cost home activities such as storytelling, singing, and playing with household tools would bring children to experiences that encourage their early development.

The empirical proof has shown that the early childhood a child whose mother is working outside the house will probably go through some processes that contain minimum cognitive stimulation. Inadequate stimulation has the potential to inhibit children's development. It has been proven that stimulation provided at home is an independent predictor of successful children's development. An unpleasant experience at an early age will have an impression and enough effect to change the composition of cells in a child's brain. The intelligence of a child raised in a minimally stimulated environment will gradually decline, and the opportunity to regain intelligence is very rare in the future. Various theories also explain that to optimize children's development, stimulation must be provided from the first three years of the child's life. Starting the stimulation at five may be too late (Baker-Henningham & Boo, 2010; Grantham-McGregor et al., 2007; Pereira et al., 2016).

Concerning this, it is very important to pay serious attention to the improvement of parents' ability and skills, especially for mothers who are working outside the house, to provide positive support for early childhood cognitive development so that the child will be able to undergo growth processes with his family at home by acquiring adequate cognitive stimulation. Therefore, research which focuses on analyzing the improvement of parents' ability and skills in stimulating

the child, particularly in the first three years of life is very strategic because until recently, there have not been a lot of studies specifically revealing parents' various activities in educating children by making use of objects found in the house.

CONCLUSION

The findings of the current study show that cognitive stimulation provided by working mothers is lower than that of non-working mothers. However, both working and non-working mothers need to be trained in how to prepare for kinesthetic and tactile stimulation at home.

This research did not discuss the difference in mothers' working hours, types of work, and socio-economic status. It is thus imperative to conduct a more comprehensive analysis to reveal the effects of these aspects on the provision of cognitive stimulation for children at home so that a proper intervention model can be formulated.

The research results have promoted the importance of designing an intervention model to stimulate children's cognitive growth, especially for working mothers who want more quality time with their children. The forenamed intervention becomes more essential since there are no special schools available to educate people to become parents. In addition, the number of mothers who spend time working outside the house is increasing. As a result, it becomes more difficult to provide positive stimulation for children on every occasion.

REFERENCES

Baker-Henningham, H., & Boo, F. L. (2010). Early childhood stimulation interventions in developing countries: A comprehensive literature review. *Inter-American Development Bank and IZA*, 71.

Barreto, F. B., Sánchez de Miguel, M., Ibarluzea, J., Andiarena, A., & Arranz, E. (2017). Family context and cognitive development in early childhood: A longitudinal study. *Intelligence, 65*, 11–22. https://doi.org/10.1016/j.intell.2017.09.006

Black, M. M., Walker, S. P., Fernald, L. C. H., Andersen, C. T., DiGirolamo, A. M., Lu, C., McCoy, D. C., Fink, G., Shawar, Y. R., Shiffman, J., Devercelli, A. E., Wodon, Q. T., Vargas-Barón, E., & Grantham-McGregor, S. (2017). Early childhood development coming of age: Science through the life course. *The Lancet; London*, *389*(10064), 77–90. http://dx.doi.org/10.1016/S0140-6736(16)31389-7

Brooks, J. B. (2011). *The process of parenting. Rahmat Fajar translation*. Pustaka Pelajar.

Caçola, P. M., Gabbard, C., Montebelo, M. I., & Santos, D. C. (2015). Further development and validation of the affordances in the home environment for motor development–infant scale (AHEMD-IS). *Physical Therapy*, *95*(6), 901–923.

Chen, W., Tanaka, E., Watanabe, K., Tomisaki, E., Watanabe, T., Wu, B., & Anme, T. (2016). The influence of the home-rearing environment on children's behavioral problems 3 years later. *Psychiatry Research, 244*, 185–193. https://doi.org/10.1016/j.psychres.2016.07.043

Dauch, C., Imwalle, M., Ocasio, B., & Metz, A. E. (2018). The influence of the number of toys in the environment on toddlers' play. *Infant Behavior and Development, 50*, 78–87. https://doi.org/10.1016/j.infbeh.2017.11.005

Grantham-McGregor, S., Cheung, Y. B., Cueto, S., Glewwe, P., Richter, L., & Strupp, B. (2007). Developmental potential in the first 5 years for children in developing countries. *The Lancet*, *369*(9555), 60–70. https://doi.org/10.1016/S0140-6736(07)60032-4

Iltus, S. (2007). Significance of home environments as proxy indicators for early childhood care and education. *Paper Commissioned for the EFA Global Monitoring Report*.

Iswarati. (2010). Pengetahuan keluarga dalam pengasuhan dan tumbuh kembang anak. *Gizi Indonesia Journal of The Indonesian Nutrition Association*, *33*(1), 67–73.

Jeon, H.-J., Peterson, C. A., & DeCoster, J. (2013). Parent–child interaction, task-oriented regulation, and cognitive development in toddlers facing developmental risks. *Journal of Applied Developmental Psychology*, *34*(6), 257–267. https://doi.org/10.1016/j.appdev.2013.08.002

Khadijah. (2016). *Early childhood cognitive development*. Perdana Publishing.

Kwaśniewska, J. M., Gralewski, J., Witkowska, E. M., Kostrzewska, M., & Lebuda, I. (2018). Mothers' personality traits and the climate for creativity they build with their children. *Thinking Skills and Creativity*, *27*, 13–24. https://doi.org/10.1016/j.tsc.2017.11.002

Lestari, S. (2014). *Family psychology: Value planting and handling family conflict* (Three Ed). Kencana Prenamedia Group.

Ministry of Education. (2007). *Learning guidelines for cognitive development field*. Ministry of Education.

Pereira, K. R. G., Saccani, R., Valentini, N. C., Pereira, K. R. G., Saccani, R., & Valentini, N. C. (2016). Cognition and environment are predictors of infants' motor development over time. *Fisioterapia e Pesquisa*, *23*(1), 59–67. https://doi.org/10.1590/1809-2950/14685223012016

Putri, V. D. (2012). Childhood practices in family farmers participant of family planners "Melati" 3 in Nguken village support district Bojonegoro. *Indonesian Journal of Early Childhood Education Studies*, *1*(2). https://doi.org/10.15294/ijeces.v1i2.9211

Ronfani, L., Vecchi Brumatti, L., Mariuz, M., Tognin, V., Bin, M., Ferluga, V., Knowles, A., Montico, M., & Barbone, F. (2015). The complex interaction between home environment, socioeconomic status, maternal IQ and early child neurocognitive development: A multivariate analysis of data collected in a Newborn Cohort study. *PLoS ONE*, *10*(5). https://doi.org/10.1371/journal.pone.0127052

Suardi, Patta, B., Anshari, & Sulaiman, S. (2019). The development of a home cognitive stimulation package for 2–3-year-old children. *The New Educational Review*, *55*(1), 208–219. https://doi.org/10.15804/tner.2019.55.1.17

Suardi, S. (2017). Development of potential local-based educative book; A child stimulation guide at home. *International Conference on Education, Science, Art and Technology*, *1*(1), 194–199.

Syamsuddin, & Muhiddin. (2011). *Language educational research methodology*. PT. Remaja Rosdakarya.

Wang, P.-J., Hwang, A.-W., Liao, H.-F., Chen, P.-C., & Hsieh, W.-S. (2011). The stability of mastery motivation and its relationship with home environment in infants and toddlers. *Infant Behavior and Development*, *34*(3), 434–442. https://doi.org/10.1016/j.infbeh.2011.04.005

World Bank. (2013). *Early childhood education and development in poor villages of Indonesia: Strong Foundation, Later Success*. World Bank

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