The Influence of Family Empowerment on Improving Mother's Knowledge About Caring For Children Age

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Parenting children in the family is fundamental in forming a good society. Mother's knowledge about childcare is a vital factor, especially for children at preschool age. Mothers who have good knowledge will be able to create an ideal environment for their children with better interactions. One way to increase mothers' knowledge about it is family empowerment interventions. The study was conducted to analyze how much influence the application of family empowerment in increasing maternal knowledge related to child care at preschool age. The research method used in this study was quasi-experimental and analyzed by t test and regression analysis. The study was conducted in the city of Yogyakarta, Indonesia, and involved 64 participants (32 control groups and 32 treatment groups). The results of this study indicate no difference in the initial data between the control group and the treatment group. While the final data (post test) there are significant differences between the two groups. The data also shows that family empowerment interventions have a positive effect of 30.8 percent to increase maternal knowledge regarding childcare at preschool age.

Keywords : *family empowerment, childcare, mother's knowledge, preschoolers*

Introduction

The family is the most important institution in society. Families that have a strong resilience will form a society that has high resilience and ultimately will be realized resilience at the national level (Benasich and Brooks-Gunn, 1996). And vice versa, the condition of society that is vulnerable to negative things, it starts from families whose resilience is fragile. Thus it can be said that various problems that occur in society such as crime, brawl, prostitution, drug

use, and even acts of corruption are a reflection of the weakness of family institutions (Cook, Roggman, and D'zatko, 2012)

Parents as full control in the family have a very instrumental and expressive role (Rice & Tucker, 1986). This instrumental function is related to family relationships with external situations, usually carried out by a father figure whose job is to earn a living. While the expressive function that is usually carried out by the mother figure, is related to the integration or solidarity of the family, internal family relationships, and the fulfillment of the emotional needs of family members, including the task of creating an optimal nurturing environment in accompanying the growth and development of their children. The importance of quality of care is shown by several research results (Adi-Japha and Klein, 2009; Hubbs-Tait et al. 2006; Zeitlin, Ghassemi, and Mansour 1990) that the quality of parenting is an important aspect in accompanying the growth and development of children . The quality of care is more determined by the caregiving environment done by her parents at home (Bradley 2002). A nurturing environment that supports child development can be created if parents have adequate knowledge about child development and care.

Previous research on parental knowledge in relation to child care and development has been carried out in several countries, such as in Turkey by Ertem, *et al*. (2007), in Brazil by Ribas Jr. and Bornstein (2005); in America by Huang, *et al*. (2005); in Canada by Oldershaw (2002); in the Philippines by Williams *et al*. (2000); and in Indonesia by Iswarati (2010). All of these studies show that the level of knowledge parents have is related to the expectations of achieving child development, creating an appropriate nurturing environment, and stimulating and providing tools to optimize children's development according to their age.

BKKBN research results in 2009 of 35,478 families about family knowledge about how to care for and growth and development of children from the physical, mental, and social aspects in 33 provinces in Indonesia showed the average composite index of child growth and development nationally reached 55.5 with a range 1 - 100 (Iswarati, 2010). This research shows that family knowledge about parenting and child growth and development has not been as expected, as contained in Law number 23 of 2002 concerning child protection regarding the obligations and responsibilities of parents and family, including relating to caring for, caring for, educating , and protect children and develop children according to their abilities, talents and interests.

One effort to increase parental knowledge is to provide family empowerment interventions, namely efforts to increase family dignity and goals to achieve family life goals. According to Christenson and Robinson (1984) empowerment is a personal and social process; a release of personal ability, competence, creativity, and freedom of action; empowered is giving a wave of strength from one person to another and also comes from within specifically the power to act and develop, to become what is called Paolo Freire 'more human'.

The empowerment model proposed by Korten and Felipe (1981 in Iskandar, Hartoyo, Sumarwan, and Khomsan, 2007) is carried out through a "learning process" approach. This approach includes several dimensions, namely: 1) structural dimension, referring to the formation of small groups as a means of implementing the program by giving position and function to each group both towards the manager and target individuals; 2) cognitive dimensions, oriented to aspects of education, training, and socialization; 3) moral dimension, oriented towards the attitude and culture approach of the community concerned; and 4) democratic dimension, oriented towards a more participatory approach. Family empowerment activities undertaken in this study belong to the cognitive dimension with an empowerment strategy that is designing and compiling material that is appropriate and targeted, namely mothers who have preschool children.

The intervention material developed in this study refers to three popular parenting books by Sunarti (2004), namely: 1) Parenting with Heart (2004); 2) Teach Children Life Skills Early on (2005a); and 3) Exploring the Power of Stories: A Guide for Parents in Forming Children's Character Early on Through Stories (2005b). Another reference material is the caregiving environmental score obtained before the family empowerment intervention activities are carried out. The material is also enriched with various videos / short films that fit the theme downloaded from Youtube. In addition, various ice breaking activities are designed as an atmosphere breaker and material reinforcer. According to Huang, *et al*. (2005) in addition to increasing knowledge, participants must also acquire skills in applying effective ways of parenting. The main focus of this intervention material is the care knowledge of preschool children (3-5 years), which is the peak of the golden age (golden age) in human development. This age is a critical period, where the child has passed through infancy and is preparing himself for a higher stage of development, namely the school age. Intervention material is printed in the form of modules to make it easier for participants to understand and repeat the contents of the material at home.

Research Method

This study uses quasi-experimental design conducted in the city of Yogyakarta, Indonesia. The implementation utilizes the Toddler Family Development Program (BKB), a community activity group that aims to increase knowledge of attitudes and behaviors and skills of families or parents in the care and development of child development (Sunarti 2011). This program is usually integrated with Posyandu activities, which are integrated family planning - health service posts. The location of the study was determined purposively based on consideration of technical aspects of the study such as the availability of facilities and infrastructure, support from figures, and whether or not the activities of underfive family building at Posyandu. The sample is divided into two groups, namely the control group (not getting a family empowerment intervention) and for the treatment group (getting a family empowerment intervention). The position of the two regions where the research is located is far enough that there is no interaction between the samples.

Sampling technique

The sample in this study were mothers who had preschool children (3-5 years old), were in good health or were not physically disabled and were able to read and write. The sample size for each group is 32 people, so the total number is 64 people. The sample in the treatment group filled out a letter of willingness regarding consent to participate in all family empowerment intervention activities.

Types and Data Collection Techniques

The type of data collected in this study consisted of primary data and secondary data. Primary data were obtained using a questionnaire and observations made to the sample residence regarding information needed in the study, including: 1) individual characteristics (age, education, occupation); 2) family characteristics (family size and income); 3) nurturing environment; and 4) childcare knowledge. Secondary data obtained from the study of documentation in the form of documents or information from relevant agencies or internet sites related to the research topic.

Measuring the caregiving environment using the HOME instrument for ages 3-5 years (Caldwell and Bradley, 1984) consisting of 55 items with a Cronbach's Alpha value of 0.839.

One item in this instrument was not included because it was considered unsuitable for local culture, bringing the total number of instruments to 54 items. The categorization of the HOME care environment score has been determined as low (0-29), moderate (30-45), and high (46 - 55). Another instrument is the instrument of knowledge development and parenting preschoolers consisting of 30 items compiled and developed by researchers with reference to the research of Oldershaw (2002) and Best Start Resource center (2011). The categorization of score data are: low (<33.3%), moderate (33.4% - 66.7%), and high (66.8% - 100%). The instrument reliability test was conducted on 10 mothers who had preschool-age children in addition to the study sample. The reliability value obtained is 0.794.

Research procedure

The study begins with the collection of data regarding information needed in the study which includes: 1) individual characteristics (age, education, occupation); 2) family characteristics (family size and income per capita); 3) nurturing environment; and 4) childcare knowledge (baseline). Then an observation is carried out to make direct observations to each sample residence. After all preliminary data is complete, family empowerment intervention activities are carried out in the treatment group of eight meetings with a duration of 90 minutes per meeting. The method used is the lecture method, discussion, simulation / game, and question and answer. Intervention material consists of: 1) a child-friendly home environment; 2) recognize the style of childcare; 3) rapid assessment of children's quality; 4) pleasant challenges part I; 5) pleasant challenges part II; 6) choice of words full of meaning; 7) explore the power of stories; and 8) teach children life skills from an early age. Each meeting was held pretest and posttest to find out the increase in the score of each material. After the intervention activities, the final stage is collecting endline data on childcare knowledge.

Processing and analysis of data

Data processing is performed using Microsoft Office Excel and SPSS programs. The stages of data processing carried out in this study include 1) collecting and cleaning data to ensure there are no errors in entering data; 2) scoring of research questions; 3) transformation of composite scores in the form of a scale of 0-100; and 4) categorization of score data. Data analysis and tabulation conducted include: 1) descriptive analysis for data on individual characteristics, family characteristics and caregiving environment; 2) Independent Samples T-Test analysis to test the differences between the control and treatment groups; 3) Paired Samples T-Test analysis to test the differences between baseline and endline developmental and parenting knowledge, as well as pretest and posttest intervention material; 4) analysis of linear regression tests to determine the effect of interventions on increasing knowledge of development and parenting.

Results and Discussion

Individual and Family Characteristics

Individual and family characteristics are important factors to know the background of the sample. Various studies have shown that the characteristics of parents and family especially the length of education taken by respondents greatly affect the level of parental knowledge (Reich, 2005; Ribas Jr. and Bornstein 2005; Ribas Jr., de Moura, and Bornstein, 2003; Tamis-Lemonda, Chen, and Bornstein, 1998; Richman, Miller, and LeVine, 1992). In addition these characteristics are also related to the quality of the childcare environment (Hastuti R 2011;

Bornstein 2002; Lugo-Gil and Tamis-Lemonda, 2008; Williams *et al*., 2000; Williams, Soetjiningsih, and Williams, 2000).

Descriptive analysis results (see Table 1) show the average age of the total sample is 31.71 years. This age indicates that the respondent is in the productive age category. The average length of education taken in the control group was 8.19 years, meaning that it did not reach the nine-year compulsory education set by the government. Whereas in the treatment group the average reached more than nine years (9.63) meaning that only a few samples were undertaking tertiary education.

Table 1 Individual Characteristics of Samples

Individual Characteristics		Control	Treatment	Total	P value
1 Age (year)	Min - Max	20 – 43	23 – 45	20 – 45	.787
	Average (±SD)	31,50 ± 6,36	31,91 ± 5,58	31,71 ± 5,97	
2 Education (year)	Min – Max	3 – 12	6 – 14	3 – 14	.030*
	Average ± SD	8,19 ± 2,74	9,63 ± 2,43	8,91 ± 2,59	
3 Job (%)	Housewife	62,5	75	68,75	-
	Pembantu rumah tangga	18,8	9,4	14,1	
	Other	18,7	15,6	17,15	
4 Number of family members (people)	Min – Max	3 – 7	3 – 6	3 – 7	
	Average ± SD	4,09 ± 1,06	4,13±0,91	4,11±0,99	.899
5 Per capita income (Rp / month / person)	Min – Max	41.666 – 1.500.000	75.000 – 1.666.667	41.666 – 1.666.667	.284
	Average ± SD	386.022,9063	466.895,8438 ±3.23094E5	426.459,37505 ±2.981325E5	
6 Urban Poverty Line	Poor	31,2	18,8	25,0	-
	Not poor	68,8	81,2	75,0	

The average sample occupation mostly plays a role as a housewife (68.75%). Judging from the education and employment data, it indicates that the stigma still remains that women do not need to be highly educated because they will not work in the public sector. The average size of the sample family is 4.11 with per capita income in the range of Rp. 41,666 - Rp. 1,666,667 / person / month and the average is Rp. 426,459 / person / month. Based on the Yogyakarta City poverty line, three-quarters of the sample are in the non-poor category, while the rest are in the poor category. T-test results showed no significant differences in individual and family characteristics between the control and treatment groups except the length of education taken by the sample with a P value of 0.030 ($p \leq 0.05$).

Nurturing environment

The results of the analysis (see Figure 1) show that only a small sample of both the control and treatment groups reached the high care environment category (the control group was 3.1%; the treatment group was 9.4%). The care environment in the medium category was the category with the largest percentage (the control group by 65.6%; the treatment group by 84.4%), whereas for the low category the control group achieved almost a third of the samples (31.3%) and the few samples in the treatment group (6.3%). Different test results showed significant differences between the control and treatment groups with a P Value of 0.019 ($p \leq 0.05$). It is suspected that this is due to the length of education of the treatment group better than

the control group so that the caregiving environment shows a better score. In addition, the position of the treatment group is closer to the city center so that it is possible to have more access to gain and increase insight and experience in providing a good care environment for children.

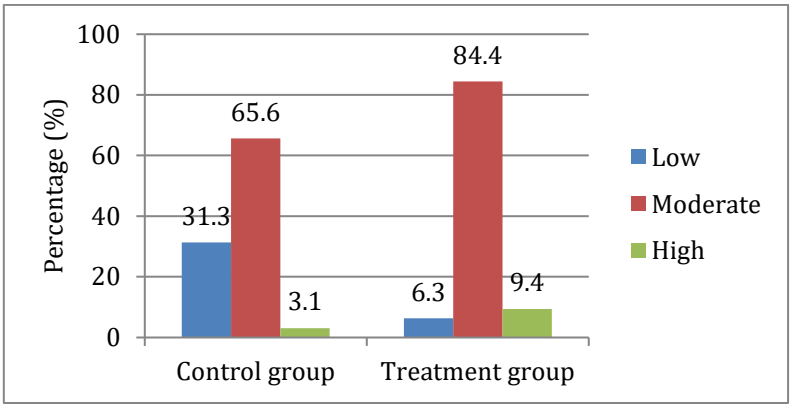

Figure 1 Distribution of Samples by Caregiving Categories to Control and Treatment Groups

Family Empowerment Intervention

The family empowerment intervention conducted in this study is to discuss the expressive role of parents by increasing the mother's knowledge regarding childcare. Activities were given using lecture, discussion, simulation / game, and question and answer methods. Various forms of ice breaking were planned according to the theme. The function of ice breaking apart from being an atmosphere breaker is also an introduction or reinforcing material. The meeting was held eight times with a duration of 90 minutes per meeting.

The intervention module was compiled and developed with reference to three popular parenting books by Euis Sunarti, namely: 1) Parenting with Heart (2004); 2) Teach Children Life Skills Early on (2005a); and 3) Exploring the Power of Stories: A Guide for Parents in Forming Children's Character Early on Through Stories (2005b). Another reference material is the caregiving environmental score obtained before the family empowerment intervention activities are carried out. Intervention material is designed so that in addition to increasing knowledge participants also acquire skills in applying effective ways of parenting (Huang, *et al*., 2005), therefore the presentation material is enriched with various videos / short films in accordance with the theme downloaded from Youtube. The material is printed in the form of modules to make it easier for participants to understand and repeat the contents of the material at home.

Table 2 Distribution of Average Attendance, Average Value, and Significance of Test Results for Pretest and Posttest Interventions for Family Empowerment in Treatment Groups

Title of Meeting Material	Attendance (%)	Average Value		*p*-value
		Pretest	Posttest	
Child Friendly Home Environment	100,0	51,8	76,2	.000*
Recognize Childcare Style	90,63	49,0	79,4	.000*
Rapid Assessment of Children's Quality	100,0	56,8	86,8	.000*
Exciting Challenges I	93,75	54,6	90,0	.000*

Exciting Challenges II	93,75	54,6	82,6	.000*
Choice of Words Full of Meanings	100,0	83,8	92,6	.003*
Dig up the power of the story	100,0	58,2	88,2	.000*
Teach Children Life Skills Early	96,88	42,6	79,4	.000*

* Signifikan pada $p \leq 0.05$

Data distribution of the average sample attendance (see Table 2) at family empowerment intervention activities shows more than ninety percent. The results of the paired sample T-test different test analysis showed an increase in the average value at all meetings. Statistical test results obtained a value of 0.005, it can be concluded that there are significant differences between pretest and posttest in all family empowerment intervention meetings conducted in the treatment group ($p \leq 0.005$). This data proves an increase in scores after the family empowerment intervention is carried out.

Childcare Knowledge

Data on knowledge of preschool-aged children were taken twice, namely before (baseline) and after (endline) intervention was carried out. Overall the results of the descriptive analysis (see Table 3) show that the average baseline score of childcare knowledge in the treatment group is higher than the control group. It is suspected that this is due to the position of the treatment group closer to the center of the city, so that access to get new experiences, broader insights and skills. Besides that, from the results of the descriptive analysis of the sample characteristics (maternal education and income per capita), the treatment group was better than the control group. This is in line with several research results (Reich, 2005; Ribas Jr. and Bornstein, 2005; Ribas Jr., de Moura and Bornstein, 2003; Williams *et al*., 2000; Williams, Soetjiningsih, and Williams, 2000) that mother education significantly related to the level of knowledge of development and parenting.

Table 3 Distribution of Average Score and Significance of Childcare Knowledge Different Test Results based on Baseline and Endline in the Control and Treatment Group

Childcare Knowledge	Control	Treatment	P value
Baseline	32.94	39,4	.095
Endline	42.94	62.94	.000*
P value	.000*	.000*	

Analysis of the different independent sample t-test tests showed a comparison between the control and treatment groups. The results of the homogeneity of the variance between the control group and the treatment group at baseline conditions showed that the Levene F test value was 0.105 with a p value = 0.747 so that it can be said that at 5% alpha there was no difference in variance (the variants of the two groups were the same). T-test results at baseline conditions obtained by -1.694 with p = 0.095. This means that there is no significant difference in parenting knowledge scores between the control and treatment groups even though the score of the treatment group is higher. Based on the results of the analysis it was concluded that the two research groups at the baseline were in the same condition.

In addition to comparing scores between the control and treatment groups, paired sample t-test analyzes were also performed to compare between baseline and endline conditions or before and after family empowerment interventions. In the control group t-test results obtained

for -3.308 with p = 0.002. This means that there are significant differences in parenting knowledge scores between baseline and endline in the control group. Likewise in the treatment group, the t-test results of -8,027 with p = 0,000 also meant that there were significant differences in parental knowledge scores between the baseline and endline in the treatment group. The results of the analysis show that even though the control group did not get the intervention, their knowledge could increase significantly. Allegedly this is due to human factors that are multi-dimensional beings, have the ability to think and the will to fulfill their curiosity in various ways such as through television, magazines / newspapers, and communicating with neighbors.

Significant score results obtained by the control and treatment groups by comparing baseline and endline scores were strengthened by the results of the analysis of the different independent sample t-test tests by comparing the scores between the control and treatment groups under endline conditions. The results of the variance homogeneity test showed the value of F Levene's test of 4.916 with a value of p = 0.030 so that it can be said that the alpha 5% obtained differences in variance (variants of the two different groups).

T-test results in the endline conditions obtained by -5.251 with p = 0.000. This means that there are significant differences in parenting knowledge scores between the control and treatment groups in endline conditions. The results of the analysis show that family empowerment interventions carried out in the treatment group affect the increase in knowledge of preschool-aged child care. Regression test results (Table 4) show the value of R Square = 0.308 which means that family empowerment interventions contribute 30.8% to the increase in children's development knowledge.

Table 4 Results of Analysis of the Effects of Family Empowerment Interventions on Improving Knowledge of Preschool Age Parenting

Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	ß	Std.Error	Beta		
(constant)	6.438	.404		15.936	.000
Group 0 : Control 1 : Treatment	3.000	.571	.555	5.251	.000
F Test (p) = 27.577 (.000) R Square = .308 Adj R Square = .297					

The results of the analysis are in line with previous studies that the interventions provided can increase maternal knowledge. Research conducted by Yuliana (2007) shows that counseling about nutrition and health can increase maternal knowledge in the treatment group with greater points (29.8 points) compared to the control group (25.2). In addition, Sunarti's research (2009) also showed an increase in knowledge in mothers in the treatment group after intervention was given regarding resources and care practices, which in the preliminary data scores of knowledge of mothers in the treatment group were lower than the control group.

This study has several limitations, including measuring only the increase in knowledge, not measuring the caregiving environment in endline conditions. Measuring the caregiving environment by using the HOME instrument in addition to requiring more time also in some

questionnaire items containing statements related to economic capacity. For example, children have toys to learn about colors, shapes and sizes; Children have free expression toys (markers, crayons, watercolors) and others. So for parents whose economic resources are limited, it will be difficult to fulfill them.

Conclusion

This study concludes that family empowerment activities have a significant effect on increasing maternal knowledge. Methods and materials regarding the care of preschoolers specifically designed for intervention activities have proven to be effective and contribute to increased knowledge. Based on the findings of this study it is expected that parents will further increase their knowledge through various activities in order to provide a better and appropriate nurturing environment for children's development. This research has implications for the strengthening of the Toddler Family Development program in Posyandu which is one way for the community to gain knowledge about child development and care. The commitment of the cadres as the spearhead of Posyandu activists is needed so that the Toddler Family Development program is held regularly. Therefore local governments and the private sector must play a role in increasing the capacity of cadres to have broad insight, adequate knowledge, and be able to communicate well. Cadre guidance which is held regularly and continuously will allow for monitoring and evaluation so that the achievements are more measurable.

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