Relationship between Mother Care Behavior and Quality of Life Stunting children in Kota Masohi District, Central Maluku Regency

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Background:Stunting is a health problem in children that can cause obstruction of various functional aspects of the child such as physical, motor and emotional social of children, this will have an impact on the quality of life children in the future. **Objective:** This study aimed to determine the relationship between maternal care behavior and the quality of life of stunting children aged 12-59 months in the Kota Masohi District, Central Maluku Regency. **Method:** The research design used was cross-sectional, with a total sample of 98 people carried out in the District of Masohi City, Central Maluku Regency, sampling using consecutive sampling techniques. Data on maternal care behavior and quality of life in children were obtained through questionnaires. The results of the study were analyzed using the chi square test and multivariate analysis with multiple logistic regression, with a significant level of $p<0.05$. **Results:** More than half of maternal care behaviors and stunting under five are poor. Chi square test values indicate that there is a relationship between maternal care behavior with stunting toddler quality of life. The results also obtained that children aged 12-24 months are more at risk of experiencing poor quality of life compared to children aged 49-59 months. **Conclusion:** There is a positive relationship between maternal care behavior with stunting toddlers' quality of life in the Masohi District District of Central Maluku Regency, where children aged 12-24 months are most at risk of experiencing poor quality of life.

Keywords**:** *Maternal care behavior, Quality of life, Stunting*

Introduction

Quality life is a goal to be achieved at all age levels including children[1]. Quality of life of children related to health is a subjective perception of the mother in assessing the functional status of children including seven domains of functions including physical (body), motor, autonomous, cognitive, social, positive mood and negative mood[2,3]. Assessment of quality of life is very important to evaluate changes in children's health and determine care in children stunting[1].

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Stunting is a condition of failure to thrive in children under five due to chronic malnutrition so that the child's body is too short for his age which affects the child's survival[4].

Parents tend to assume that stunting is a natural thing so care is only given when the child is sick. This can affect the health conditions of children. Quality of life of stunting children depends on maternal care behaviors [5] such as feeding, caring for children when sick, stimulating child development and interacting more often with children[6,7,8].

Stunting is a problem in Indonesia and is spread throughout Indonesia, including Central Maluku Regency, where in the last three years the prevalence of stunting under five has increased [9]. The purpose of this study was to determine the relationship between maternal care behaviors and quality of life of stunting children in the District of Masohi City, Central Maluku

Regency.

Material and Methods

This research was conducted in April to May 2019. The research design used was cross-sectional. The sample selection is done by consecutive sampling technique, with inclusion criteria; mothers and children stunted (12-59 months), residing in the District of Masohi City, Central Maluku Regency and willing to sign informed consent by mothers, be able to read and write. Exclusion criteria in this study are mothers and children who have disabilities and suffer from chronic diseases. During data collection mothers and children do not experience illness. To ensure that mothers and children do not experience pain (figure 1). Respondents approval was requested by signing an informed consent.

Figure 1. How to take samples

Instrument (1) Maternal care behavior questionnaire, was adopted from the Ulfi (2018)[10]. The value of validity obtained is 0.413-0.800 and cronbach's alpha 0.932. The questionnaire consists of 37 questions using a Likert scale; often (score 5), always (score 4), sometimes (score 3), rarely (score 2), and never (score 1).

(2) Questionnaire quality of life, was adopted from the Manongga (2011)[2], with a validity value of 0.413-0.839 and its reliability, the cronbach's alpha value is 0.844. Child's quality of life related to health is obtained from the mother's report through filling in the quality of life questionnaire, by looking at the functional status of the child in the last month which consists of various aspects; physical, motor, autonomic, social, cognitive, and emotional both negative and positive[3]. Each aspect consists of 8 questions using a Likert scale that is often (score 0), always (score 1), sometimes (score 2), rarely (score 3), and never (score 4)[3].

The total values obtained for both maternal care behaviors and the quality of life of children are divided by median values into two categories; "good and not good"

(3) Tools for measuring the growth status of children using height measuring instruments namely microtoice and infantometer. Z-score values for calculating height or body length by age were calculated using WHO Anthro Software, and adapted to TB or PB standards based on the decision of the Minister of Health of the Republic of Indonesia number 1995/Menkes/SK/XII/2010 regarding anthropometric standards with indicators of children were severely stunted (SD score <-3) and stunted (SD score -3 to <-2).

Statistics:The statistical test used is the chi-square test with the confidence level used is 95%. Next, the researcher conducted a multivariate multiple logistic regression test with a stepwise backward method to look at the variables that affect the quality of life of the child. The variables included in this test are those that have a significant value ($p<0.25$) where the analysis is seen in the value of p and the strength of the relationship. The variable is said to affect the dependent variable if the value of $p<0.05$ and see the Odds Ratio (OR) value[11].

FINDINGS

A total of 98 couples of mothers and stunting children were respondents in this study. In table 1, the data shows that most mothers of children under five are stunting in the age range of early adulthood (52%), most of the mothers work as housewives (85.7%), with the most education at secondary education level (46.9%), and 53.1% of family income above. Based on the characteristics of children, the highest age is 12-24 months (37.8%), where between men and women have comparable numbers (50%) and on the nutritional status of children (TB or PB/Age), most were in the short category (81.4%).

Table 2 shows that more than half of maternal care behaviors (55.1%) and the quality of life of stunted children (52%) are in a poor category. The results also showed that maternal care behavior was significantly influenced by mother's education and family income, while the quality of life of children was affected by the age of the child ($p<0.05$).

In table 3, data are obtained that children aged 12-24 months compared with children aged 49-59 months and maternal care behavior are less good compared to good maternal care behavior, significantly both groups have an influence on the quality of life of children who are not good ($p<0,05$). The OR value between children aged 12-24 months is greater than maternal care behavior which is equal to 6.031, meaning that stunting children with an age range of 12-24 months are more at risk 6.031 times

having a poor quality of life compared to stunting children with an age range of 49-59 months after being controlled by the mother's bad behavior.

Table 1. Characteristic of mothers and children

Characteristics	Frequency (f)	Persentasi (%)	Mean ± SD
Mother Age (year) Late youth (17–25) Early adult (26-35) Late adult (36-45)	 21 51 26	 21,4 52 26,5	31,45 ± 6,17
Occupation Housewife Civil servants Farmer	 84 4 10	 85,7 4,1 10,2	
Educational level Lower secondary Upper secondary Unirvesity	 30 46 22	 30 46,9 22,4	
Parental income Low Hight	 52 46	 53,1 46,9	
Child Age (months) 12-24 25-36 37-48 49-59	 37 30 16 15	 37,8 30,6 16,3 15,3	31,57 ± 12,37
Sex Man Women	 49 49	 50 50	
Nutritional status Stunted Severely Stunted	 80 18	 81,6 18,4	

Table 2. Maternal care behaviors and quality of life children

Characteristics	Maternal care behavior				P	Quality of life child				P
	Good		Not good			Good		Not good		
	n	%	n	%		n	%	n	%	
Maternal care behavior	44	44,9	54	55,1						

Cont... **Table 2. Maternal care behaviors and quality of life children**

Quality of life child						47	48	51	52	
Age child (months) 12-24 25-36 37-48 49-59	 13 17 8 6	 35,1 56,7 50 40	 24 13 8 9	 64,9 43,3 50 60	 0,331	 12 14 10 11	 32,4 46,7 62,5 73,3	 25 16 6 4	 67,6 53,3 37,5 26,7	 0,032*
Educational level mother's Lower secondary Upper secondary Unirvesity	 8 23 13	 26,7 50 59,1	 22 23 9	 73,3 50 40,9	 0,043*	 12 22 13	 40 47,8 59,1	 18 24 9	 60 52,2 40,9	 0,396
Occupation Housewife Civil servants & farmer	 42 2	 50 14,3	 42 12	 50 85,7	 0,013*	 43 4	 51,2 28,6	 41 10	 48,8 71,4	 0,177
Parental income Low Hight	 25 19	 48,1 41,3	 27 27	 51,9 58,7	 0,501	 27 20	 51,9 43,5	 25 26	 48,1 56,5	 0,404

**chi-square test*; p<0,05

Table 3. The results of logistic regression test

Variabel	P value	OR	CI (95%)
Maternal care behavior			
Good (reference)		1,00	
Not good	0,02*	2,837	1,179 - 6,824
Age child (months)			
12-24	0,01*	6,031	1,527 - 23,817
25-36	0,053	4,029	0,982 - 16,531
37-48	0,431	1,883	0,390 - 9,084
49-59 (reference)		1,00	
Occupation Housewife Civil servants Farmer (reference)	 0,107 0,192 1,00	 0,230 0,163 1,00	 0,038 – 1,375 0,011 – 2,483

* p <0,05

Discussion

Maternal care behavior is part of parenting that is very necessary in stunting toddlers, especially in meeting the needs of children to prevent adverse effects that will occur and as a determinant of the quality of life of children in the future.

Needs that can be given to stunting children such as adequate and age-appropriate feeding of children, monitoring children's growth and development, providing psychosocial stimulation, seeking treatment, and access to health services as well as providing a safe and hygienic environment[7].

In this study, maternal care for stunting infants was mostly obtained in the less category. Mother's care has a positive impact on children's quality of life[12]. Maternal care behavior is part of parenting that is useful for improving the quality of life of children which can be seen through the development and growth of children.

The results of this study indicate that maternal care behavior is influenced by mother's education and work. Education is closely related to knowledge about how to care for children[13]. Lack of maternal care behavior associated with maternal education is due to lack of knowledge of mothers in child care such as nutrition, stimulation and utilization of health services[14].

This condition is at risk for low motor, cognitive and socio-emotional development barriers in stunting children[15].

Maternal care behavior is also influenced by the mother's occupation, where most mothers who behaved poorly were found in mothers who worked as civil servants and farmers. This is because the intensity and time of the mother are less shared with the child than the housewife. One of the care strategies in parenting recommended by WHO is to build interactions between mothers and children who are pleasant and provide stimulation and provide early learning that can be done through storytelling or playing with children. This interaction is more obtained if the mother has a longer time with the child and affects the relationship and closeness between mother and child[16].

In this study, it was also found that the quality of life of children was not good, but the difference between the quality of life of good and poor children was not much different. Quality of life of children is influenced by maternal parenting[5]. Lack of maternal care for stunting children will have an impact on children's survival. Some evidence has shown that stunting can result in children being susceptible to diseases[17], changes in structure and brain development is slow so that it can affect; cognitive, emotional [18], fine motor skills, and language[3].

The functional barriers that occur in stunting children can be prevented through increasing maternal knowledge about care in stunting children by the way parents must increase nutrient intake, perform stimulation[19], seek information, check and monitor child development by visiting health facilities, health workers and through social media. In addition, parents need to be made aware of the effects of stunting on children's development which can affect the quality of life for children[20].

The results also found that children aged 12-24 months were more at risk of experiencing poor quality of life of children. Salonga (2007) states that stunting children experience stunted structural growth and brain function. At this age the child is in very rapid brain growth[21], especially the process of nerve cell myelination and synapse formation which increases gradually starting from the newborn and the fastest in the first 2 years. Both of these processes are useful for cognitive, language, motor, behavior and intelligence of children[22]. Walker et al. (2015) state that the impact of stunting that occurs at an early age is at risk for the next age[23]. Therefore children with an age range of 12-24 months really need adequate care both nutrition and stimulation for functional functional maturity.

Conclusions

There is a relationship between maternal care behavior and the quality of life of stunting children in the area of Kota Masohi District, Central Maluku Regency.

Limitations of the study: In this study perceptual equations for measurement of TB or PB but not interrater reliability tests were carried out.

Conflict of Interest: None

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