The Exposure of Gap Competence causes in Stunting Children Ages 0-12 Months in Makassar Indonesia: Cross-Sectional Study

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Abstract

Introduction, The parenting gap is believed to be one of the variables that influence stunting. The Objectives of this study to identify gaps in care (feeding practices, care, hygiene, and treatment of children) and incidence of stunting. Method this study is a cross-sectional, conducted in March-June 2020 in Makassar City Indonesia. The sample size was 82 people, of children aged 0-12 months. The data collectors are alumni of applied nutrition and dietetics degrees, trained for 2 days in health protocol, interviews, and anthropometry. The instrument in this study was developed from the UNICEF. The result, found that mothers and fathers graduated from high school, 43% and 59.8%, respectively. The work of mothers as housewives is 84.1% and fathers are private employees as much as 36.6%. The parenting competency gap in the feeding practice of children aged 0-6 months, 7-9 months, and 10-12 months is 20.9%, 71.79%, and 92.31%, respectively. The results of statistical analysis showed that there was an effect of parenting competency gaps on stunting (p = 0.000). The conclusion is that the parenting competency gap is proven to affect the incidence of stunting. The suggestion is that it is necessary to increase the capacity of mothers in child care practices/

Keywords: *Parenting Competency Gap, Stunting*

Introduction

Currently, the most serious nutritional problem in Indonesia is stunting. The national prevalence of stunting is 36% and South Sulawesi reaches 30.8%. The impact caused by stunting is low academic potential, high risk of non-communicable diseases, high-cost burdens on health services, and low productivity. The problem of stunting must be prevented because the incidence of stunting from birth is difficult to treat. This means that starting from pre-pregnant and pregnant should intervene with nutrient-rich foods of local potential [(1), (2), (3).]

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Prevention of stunting is best done through the consumption of foods of sufficient quality and quantity during pregnancy up to 2 years [(3), (4).] The problems faced in meeting the quality and quantity of food according to nutritional needs are income, preferences, availability, and nutritional knowledge. Sufficient income guarantees food diversification and food availability. The problem is only in consumer preferences, which limit a variety of food choices, including children's food. If the caregiver does not understand how to feed the child, the effect was low consumption of nutrients. The longer this happens, the exposure, the greater the risk of stunting[(5),(6)(4)].

Maternal competence is not only feeding practice but also hygienic practice and child care practice [(7),(8),(9)] This competency component should be owned by mothers before having children. In this context, it stands to reason that maternal nutritional literacy is urgently needed[(10)]. Studies are needed to measure the effect of

the competency gap above the risk of stunting.

Objectives

Analyzing the effect of competency gaps on stunting of children aged 0-1 2 months

Methods

Design and Procedure

The research design was a survey with a cross-sectional study. The sample size is calculated based on the following sampling formula [11]. Based on the sampling formulation above, it was determined that the sample size of the mother was 84 people. Procedure data collected; (1) 2-day Enumerator Training with materials on Health Protocols for the Prevention of COVID-19, Research Interview and Anthropometric Measurement, (2) Field Officer Coordination Meeting with Enumerators, (3) Selection and randomization of participant numbers between 0-12 mo. All enumerators are provided with a mask and a hand sanitizer as well as for all nannies. Data collection was carried out for 7 days with details of 10 enumerators with a target number of 82 people or the equivalent of 10 people and one enumerator for the seven days of the survey. Supervisors make field visits to ensure that health protocols are carried out properly.

Statistical Analysis

To Analysis of the effect of GAP on Competence with Stunting tested by the Chi Square test. The competency gap in child feeding practice is measured by the frequency, amount, consistency, and variation of child feeding compared to the fact of child feeding with the standard of child feeding by UNICEF with indicators. And The ability of caregivers to know the concept of child care and implement it in child care according to the principles of child care includes the use of cleaning tools (soap), washing hands, using child masks, mother masks, masks of other family members, bathing and washing hair. The score for caring practices was 6-14 pints of the 7 question items.

Competency of hygiene practice can be defined is the ability of caregivers to know the concept of children's hygiene and sanitation and implement it in children according to the principles of individual hygiene includes bathing children, stimulating toilet training, and using foot mats. The hygiene practice competency score is 5-9 points from 4 question items.

Health seeking behavior competence can be defined, the ability of caregivers to know the right treatment-seeking concept implements it in the pattern of seeking treatment for children when they are sick. The medical competency score is 1-2 of 1 question.

Results

Characteristics of Respondents

Table 1. Characteristics Subjects

Demography		Father		mother	
		n	%	n	%
Education					
§	elementary school	8	6.1	5	6.1
§	junior high school	10	12.2	10	12.2
§	Tama High School	49	59.8	31	37.8
§	College	18	22.0	36	43.9
§	Sub-total	82	100	82	100

Cont... **Table 1. Characteristics Subjects**

Occupation					
§	Workers	26	31.7	69	84.1
§	government employees	19	23.2	5	6.1
§	Traders	7	8.5	2	2.4
§	General employees	30	36.6	6	7.3
§	Sub-total	82	100	82	100

Based on the results of this study it is known that in general, the mother's education is higher than that of the father. Father and mother's college education is 22,% and 43.9%. Based on the results of this study, it is known that the father's job is as a private employee 36.6%, and the mother as a housewife 84.1%.

Parenting Competencies

Table 2. Parenting Competencies

Patenting Competencies	**Categories**	**0-6 mo n (%)**		**7-9 mo n(%)**		**10-12 mo n(%)**	
Feeding Practice	Lack of	9	20.93	28	71.79	36	92.31
	Good	34	79.07	11	28.21	3	7.69
	Subtotal	43	100	39	100	39	100
Caring Practices	Lack of	29	67.4	19	70.4	9	75.0
	Good	14	32.6	8	29.6	3	25.0
	Subtotal	43	100	27	100	12	100
Hygiene	Lack of	25	58.1	11	40.7	6	50.0
	Good	18	41.9	16	59.3	6	50.0
	Subtotal	43	100	27	100	12	100
Health Seeking Behavior	Lack of	05	11.6	1	3.7	0	0
	Good	38	88.4	26	96.3	12	100
	Subtotal	43	100	27	100	12	100

Based on the results of the study, it is known that at the age of fewer than six months or during the exclusive breastfeeding period, the competence of mothers in giving food is still good because only by paying attention to breastfeeding properly

Nutritional status

Table 3. Child Nutritional Status

Nutritional Status	Categories	0-6 mo n (%)		7-9 mo n (%)		10-12 mo n (%)	
Stunting	Severely Stunted	3	7.0	1	3.7	1	8.3
	Stunted	4	9.3	3	11.1	2	16.7
	Normal	36	83.7	23	85.2	9	75.0
	Subtotal	43	100	27	100	12	100

Based on the results of this study, it is known that the percentage of children who are stunted (very short and short) increases with age. Stunting in the 0-6 months, 7-9 months, and 10-12 months age groups were 16.3%, 14.8%, and 25.7%, respectively.

Parenting Competency Status Gap

Table 4. Parenting Gap Competencies

Status	n	%
Not real Gap Competencies (NRGC)	48	58.5
Real Gap Competencies (RGC)	34	41.5
total	82	100

Based on the study results it is known that the gap in childcare competence is not really as much as 58.5% and very real as much as 41.5%.

Effect of Competency Gap on Stunting

Table 5. Parenting Gap with Child Stunting

Status	The Status of Gap Competencies			P
	NRGC n (%)	RGC n (%)	Total	
Stunting	2 (2.4)	12 (14.6)	14 (17.1)	0.000
Normal	46 (56.1)	22 (26.8)	22 (26.8)	
total	48 (58.5)	34 (41.5)	82 (100)	

Based on the results of this study, it is known that there is an effect of competency gaps on the incidence of stunting in children aged 0-12 months (p = 0.000)

Discussion

The important outcome in this study is the gap in the competence of care for feeding, hygiene, care, and treatment. The gap in the competence of child feeding practices for caregivers found in this study is that the older the age, the feeding gap becomes more pronounced because the percentage of children who are not good at feeding practices increases from 20% to 92.3% at age 0 -6 months to 10-12 months of age. Almost the same as the gap in children's caring practices competence for caregiver mothers, the percentage of mothers with poor care practices from 67.4% at 0-6 months of age, and an increase of 10-12 months to 75%. The gap in children's hygiene competence for caregivers is the only competency that is getting better day by day from 41.9% good status at 0-6 months to 50% in the 10-12 month age group. The gap in children's health-seeking behavior for caregivers, in general, is very good 100% at 10-12 months of age and only 88.4% is good in the 0-6 month age group. The results of the analysis of the effect of the influence of the competency gap on stunting of children aged 0-12 months were found that there was an effect of the parenting competency gap on the incidence of stunting in children aged 0-12 months.

The results of previous studies that are in line with the findings in this study are research conducted by Sirajuddin, Nursalim, et al (2020), which states that the practice of complementary feeding that is owned by mothers is very important to prevent stunting. The research of Sirajuddin et al. (2000) explained that the way mothers feed their children, especially complementary foods, affects the incidence of stunting. This study also found evidence that overall parenting competence is also an integral part of child feeding practices. Competence in feeding practice is in line with a study by Sukmawati and Sirajuddin,(2020) when children eat, ideally, they should still be accompanied by the mother, not only those who are still being fed, but also for children who can feed themselves without being fed.

The competence of child feeding care is related to the mother's ability to continue to breastfeed exclusively and also to overcome all breastfeeding problems. This condition is very beneficial at the same time there is a threat of decreasing purchasing power due to the COVID-19 pandemic. For mothers who have decided to wean their children, of course, they will face purchasing power [(14)]. It is suspected that some families affected by the pandemic have lost their jobs and daily income (Pérez-Escamilla, Cunningham, and Moran 2020). However, there are advantages for those who are still exclusively breastfeeding, as evidence from previous studies that in poor families, breast milk is very helpful in supplying children's needs so that they are not prone to becoming stunted, especially in the first 1000 days of life [(12)]

A longitudinal study conducted in Cambodia in 2020, found that competence in child feeding parenting should increase in each age group. Mothers who can increase their capacity in childcare based on the child's age can assure that their child's nutritional consumption will be fulfilled. The practice of feeding children based on 4 indicators of child feeding globally was not taken seriously in this study by caregivers [(15)]. The same study also reported from Guatemala, 2014 that the indicators of the quality of child feeding always differ between regions. It is desirable that observations that are not only carried out quantitatively on these 4 indicators but should also be combined with a qualitative approach. This is aimed at exploring local practices as indigenous customs of the surrounding communities. The use of local food ingredients and special methods that have developed naturally in the community [(16)]. Improvements in nutritional status, especially stunting, not only pay attention to nutrient intake but also hygiene and sanitation as factors that directly affect children's stunting status. [(16), (17),(18)].

The limitations of this study are that it cannot make intensive observations on the practice of parenting. This is due to the limited access to house visits by enumerators due to the social distancing policy that was enforced during the COVID-19 pandemic in Makassar City in April-June 2020. Enumerators have been trained to interview before the interview was conducted. Several attempts were made by researchers to anticipate the weaknesses of this study.

The generalization (generalizes) in this study is that there is very strong evidence of gaps in parenting competence to mothers. This gap increases with increasing children's age. The reason is that there is no effort to increase the capacity of mothers on how to care

for children based on age groups. Ideally, the capacity of mothers will be improved with increasing age of the child, because the complexity of care is greater and requires seriousness in every childcare practice.

Conclusions

The effect of the competency gap on the stunting of children aged 0-1 2 months is that the more real the competency gap is, the greater the risk of children becoming stunted. Capacity building for caregivers is needed according to the child's age. Capacity building in the practice of feeding and caring for children through mentoring activities at the household level.

Ethical Clearance: Taken from the Ethics Commission of Makassar Health Polytechnic Indonesia

Sources Founding: Sources Founding from Health Polytechnic of Makassar, Indonesia.

Conflict of Interest: Author declare no conflict of interest in this study.

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