

Original Research

The Relationship Between Mothers' Knowledge and Attitudes Regarding the First 1000 Days of Life and the Incidence of Stunting



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Article Info	Abstract
<p>Article history: Received: 15 November 2023 Accepted: 19 April 2024</p> <hr/> <p>Keywords: first 1000 days, knowledge, maternal attitude, stunting</p>	<p><i>Introduction:</i> Stunting is a disruption in the growth and development of children due to chronic malnutrition and recurrent infections, which is characterized by their length or height being below standard. In 2021, stunting in Buleleng Regency was at 8.9%, indicating a decrease from the prevalence rate of 22.05% in 2019. Based on Buleleng health data in 2021, in Banjar District, 188 toddlers were experiencing stunting out of a total of 1462 toddlers, with a percentage of 12.86%. This research aims to determine the relationship between maternal knowledge and attitudes regarding the first 1000 days of life and the incidence of stunting in Banjar District.</p> <p><i>Methods:</i> This research was conducted using a cross-sectional approach with a sample of mothers who had stunted children aged 0-5 years in Banjar District. Data was collected by conducting structured interviews and distributing research questionnaires which will be analyzed using qualitative analysis.</p> <p><i>Results:</i> The findings of this study identified three categories of maternal knowledge: mothers with a high level of knowledge (9.52%), mothers with a moderate level of knowledge (41.27%), and mothers with a low level of knowledge (49.21%). A p-value of $0.000 < 0.05$ indicated a correlation between the knowledge and attitudes of mothers regarding 1000 HPK nutrition and the incidence of stunting in Banjar District.</p> <p><i>Conclusion:</i> The findings indicate a strong positive link between mothers' knowledge and attitude and the incidence of stunting. Increasing mothers' knowledge about children's nutrition related to the first 1000 days of life can reduce the incidence of stunting.</p>

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INTRODUCTION

Stunting refers to a condition in which the growth and development of a child are hindered as a result of prolonged malnutrition and frequent illnesses. It is defined by a below-average stature or height, as stated by the Ministry of Health of the Republic of Indonesia (2022). Stunting exerts both short-term and long-term effects on toddlers, manifesting in heightened rates of mortality and morbidity as well as impeding psychomotor, cognitive, and mental development. These consequences are closely associated with compromised psychosocial functioning during adolescence. Moreover, as stunted children reach adulthood, they are more prone to experiencing degenerative diseases and have reduced labor capacity. Stunting is still a major public health problem in low- and middle-income countries, including Indonesia [1].

Based on the findings of the Indonesian Nutrition Status Study (SSGI) conducted by the Ministry of Health, it is evident that the incidence of stunting in Indonesia remains significantly elevated, standing at 24.4% in the year 2021. According to the Indonesian Ministry of Health (2021), the current prevalence of stunting in Bali stands at 10.9%, with Buleleng Regency being ranked fifth in the aforementioned year. According to the government of Buleleng Regency (2021), the prevalence rate in 2021 was recorded at 8.9%, which indicates a decrease from the previous rate of 22.05% in 2019. According to the health data for Buleleng in 2021, the Buleleng Regency had a total of 1004 short toddlers, accounting for 3.6% of the population.

Additionally, there were 811 undernourished toddlers, representing 2.9% of the population, and 259 short children, constituting 3.0% of the population [2].

According to the data provided by the Government of Buleleng Regency in 2021, it can be observed that the Banjar District has a significant prevalence of stunted growth among toddlers. According to the data provided by the Government of Buleleng District in 2021, the Banjar Sub-district is divided into two primary healthcare centers, namely Banjar I Community Health Center and Banjar II Community Health Center. Banjar I Community Health Center reported a total of 135 short toddlers, accounting for 6.7% of the population in that area. On the other hand, Banjar II Community Health Center recorded 62 short toddlers, representing 7.0% of the population. In terms of undernourished toddlers, Banjar I Community Health Center reported 74 cases, which accounted for 3.6% of the population in that area. Banjar II Community Health Center, on the other hand, had 30 cases of undernourished toddlers, representing 3.3% of the population. Furthermore, Banjar I Community Health Center reported 35 cases of short toddlers, accounting for 5.8% of the population in that area. Banjar II Community Health Center had 16 cases of short toddlers, representing 4.8% of the population. According to the data collected thus far in the Banjar sub-district, there is a prevalence of stunting observed in 188 out of a total of 1462 toddlers, resulting in a stunting rate of 12.86% [3].

Previous studies have extensively examined the knowledge and attitudes of

mothers during the first 1000 days of a child's life [4], [5], [6]. Nutrition and nutrients that are met will maximize the growth and development of the body and key organs that occur and survive permanently in children [7]. Food supply in the first 1000 days of a child's life has consequences for their health later in life. An adequate food supply helps children grow healthy and intelligent. Providing nutrition from an early age is a necessity that must be fulfilled appropriately and optimally [8]. Support for good nutritional intake for children requires the ability of mothers to provide care for children [9]. However, this particular study introduces a fresh approach by incorporating a comprehensive assessment of the child's medical history and physical examination. The failure to promptly address stunting in Banjar District will result in a rise in the prevalence of stunting, hence posing detrimental effects on children, including an elevated susceptibility to degenerative ailments such as cancer, diabetes, and obesity. If the findings of this study prove to be successful, it is anticipated that there will be a positive influence on the well-being of children residing in Banjar Sub-district. This is primarily due to the establishment of an effective nutritional framework spanning from pregnancy to the first two years of life. Given the aforementioned issues, it is imperative to undertake a research study on mothers' knowledge and attitudes pertaining to the first 1000 days of life, in conjunction with the prevalence of stunting. This investigation will be supplemented by anamnesis and the physical examination of infants [10], [11].

The objective of this study is to assess the extent of maternal knowledge regarding the significance of nutrition during the initial 1000 days of an infant's life. Additionally, it aims to evaluate the attitudes of mothers towards nutrition during this critical period. Furthermore, the study seeks to examine the correlation between maternal knowledge and attitudes pertaining to nutrition within the first 1000 days of life.

METHODS

Study Design

The present study employs a descriptive research design utilizing a cross-sectional approach. The cross-sectional approach refers to a study methodology wherein the investigator collects data on independent and dependent variables in a single instance, without any further follow-up or longitudinal assessment.

Data Collection

The initial phase of this project will involve the collection of demographic data from the designated research site, which will be followed by a formal request for approval to utilize a representative sample. Following the collection of the research sample, the next steps will involve conducting anamnesis and physical examinations to assess the child's condition. This was then followed by giving a questionnaire to the mother, which focused on collecting information regarding nutrition during the first 1000 days of the child's life. Once all the data has been collected in an appropriate manner, it can then be subjected

to analysis in order to draw conclusions regarding the research findings.

The study employed structured interviews and questionnaires as the primary methods for data collection. Structured interview procedures were employed to gather data pertaining to the maternal history. In the interim, the assessment of maternal knowledge will be conducted through the utilization of a closed questionnaire including 25 inquiries that encompass topics related to nutrition during pregnancy, as well as the periods of infancy from 0 to 6 months and 6 to 24 months. In order to assess the mother's perspective on nutrition during the 1000-day period of a child's life, a closed questionnaire of 15 case-based questions will be employed. The inquiry consists of eight interrogative statements that elicit affirmative responses and seven interrogative statements that elicit negative responses. Each question is followed with response possibilities of agreement, uncertainty, and disagreement. The present study employed data analysis techniques to assess the knowledge and attitudes of mothers.

Sample and Sampling Technique

Regarding this study, the total population is 76 mothers with children aged 0-2 years who are stunted. The sample consisted of 63 mothers residing in the Banjar sub-district who had stunted children between the ages of 0 and 5 years. The variables under investigation encompass maternal knowledge pertaining to nutrition during the initial 1000 days of a child's life, maternal attitudes

concerning dietary patterns during the initial 1000 days of a child's life, and the prevalence of stunting, which refers to the condition where a child's height falls below the average for their age.

Study Analysis

Quantitative analysis was utilized to examine the data collected from completed questionnaires. Additionally, univariate and bivariate analyses were employed to investigate the association between maternal knowledge and attitudes pertaining to nutrition during the initial 1000 days of a child's life. Maternal knowledge will be deemed satisfactory if the attained results or scores are equal to or greater than 80, acceptable if falling within the range of 60-79, and inadequate if less than 60. The data pertaining to the outcomes of the maternal attitude questionnaire is considered satisfactory if it equals or exceeds 80, adequate if it is within the range of 60-79, and insufficient if it is less than 60. The subsequent phase involves establishing a correlation between the findings pertaining to maternal knowledge and attitudes and the outcomes derived from examinations conducted on children exhibiting stunted growth. If the findings indicate a negative correlation, one can infer that there is a significant association between elevated levels of maternal knowledge and attitudes pertaining to nutrition during the initial 1000 days of an infant's life and a reduction in stunting rates. Conversely, if the correlation is positive, it can be deduced that diminished levels of maternal knowledge and attitudes

concerning nutrition during the first 1000 days of an infant's life are linked to an increase in stunting rates.

regarding nutrition in the first 1000 days of life and the incidence of stunting in Banjar sub-district is presented in Table 1.

Ethical Clearence

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Bivariate Analysis

The findings of this study yielded data on maternal knowledge pertaining to nutrition throughout the initial 1000 days of an infant's life. Specifically, the study identified three categories of maternal knowledge: mothers with a high level of knowledge (9.52%), mothers with a moderate level of knowledge (41.27%), and mothers with a low level of knowledge (49.21%).

RESULTS

Univariate Analysis

The distribution of respondents' characteristics related to the relationship between mothers' knowledge and attitudes

Table 1

Characteristics of Research Respondents

Characteristics (n=63)	n (%)
History of Stunting in the Family	
Yes	8 (12,70)
No	55 (87,30)
Maternal History of Disease During Pregnancy	
Yes	7 (11,11)
No	56 (88,88)

Table 2

The Maternal Knowledge Proficiency Regarding Nutrition Throughout the Initial 1000 Days of Life

Category (n=63)	n(%)
Good	6 (9,52)
Average	26 (41,27)
Less	31 (49,21)

Table 3

An Examination of Maternal Perspectives on Nutritional Provision during the Initial 1000 Days of Life

Category (n=63)	n (%)
Good	32 (50,79)
Average	24 (38,10)
Less	7 (11,11)

Table 4

Cross tabulation of the relationship between mother's knowledge and attitude regarding nutrition in the first 1000 days of pregnancy

Cross tabulation	r	p values
Relationship between mother's knowledge and attitude regarding nutrition in the first 1000 days of pregnancy	0,531	0,000

DISCUSSION

According to the data shown in Table 1, it is evident that among the 63 participants, 8 individuals (12.70%) reported having a familial predisposition to stunting, while the majority of respondents, specifically 55 individuals (87.30%), did not have a family history of stunting. Furthermore, the study revealed that a total of seven participants, accounting for 11.11% of the sample, reported a previous occurrence of maternal sickness throughout their pregnancies.

According to the findings presented in Table 2, it can be observed that a majority of mothers possess inadequate knowledge pertaining to nutrition throughout the initial 1000 days of a child's life. Another study conducted by Sari [12] found that at the time of the pre-test, the mothers with a level of knowledge in the low category were 13 (68.4%), while mothers with a level of

knowledge in the good category were 8 (32.6%). According to the findings shown in Table 3, the data collected indicates that a majority of mothers (50.79%) who have stunted children exhibit a positive attitude towards nutrition during the first 1000 days of life. Additionally, a significant proportion of mothers (38.10%) demonstrate sufficient attitudes in this regard, whereas a smaller percentage of mothers (11.11%) exhibit negative attitudes.

The r-value obtained in this study was 0.531, suggesting a strong positive association between knowledge and attitudes. This means that individuals with greater information tend to exhibit attitudes that are 0.531 units higher than those with lesser knowledge. This study demonstrates a significant correlation between the knowledge and attitudes of mothers toward 1000 HPK (Healthy, Smart, and Happy) nutrition in Banjar Sub-district. The findings

of this study suggest adequate knowledge regarding nutrition throughout the first 1000 days of life is associated with a favorable disposition towards ensuring proper nutrition during this critical period, with the aim of mitigating the occurrence of stunting. Development during fetal life and infancy is characterized by rapid growth as well as the maturation of organs and systems. Changes in nutrition, both in quality and quantity, during these periods may permanently influence the way these organs mature and function [13]. Prior studies conducted by Admasari [14] and Subratha and Peratiwi [15] have indicated a significant association between knowledge and attitudes pertaining to the first 1000 days of life.

Specifically, these studies have found that possessing a comprehensive understanding of this critical period positively influences individuals' attitudes toward it. According to a study conducted in Bali in 2020, it was shown that maternal knowledge and attitudes play a significant role in the occurrence of stunting [13]. Attitude, in its essence, refers to an individual's subjective response or disposition towards a certain stimulus or object. In the context of human development, knowledge serves as a fundamental framework or set of principles that individuals utilize to influence their attitudes and behaviors. To enhance maternal awareness of nutrition within the initial 1000 days of a child's life, it is imperative to foster a desire among mothers to align their attitudes with their acquired information, thus enabling them to effectively address their children's nutritional requirements.

NURSING IMPLICATION

In this study, health checks were carried out on children by carrying out physical examinations consisting of the child's height, weight, head circumference, and arm circumference to determine the child's nutritional health status.

LIMITATION

It is hoped that this research can provide additional information to health workers because, with this information, new ideas can emerge in the health sector to increase maternal knowledge as a preventive effort to prevent stunting. Apart from that, with this research, it is hoped that efforts to improve nutrition can emerge through policies that can be implemented.

The limitations of this research are limited implementation time, limited researcher abilities, and the lack of ability of the respondents to understand the questions.

CONCLUSION

The findings of the study indicate a statistically significant link ($p < 0.05$) between the knowledge and attitude of mothers of toddlers regarding the 1000 HPK program in Banjar District. The obtained correlation coefficient (r) in the study is 0.531, suggesting a positive association of moderate strength. This implies that a gain in knowledge is associated with a higher positive attitude, with a magnitude of 0.531 units higher for individuals with greater knowledge compared to those with lesser knowledge. This study demonstrates a correlation

between the knowledge and attitudes of mothers regarding 1000 HPK nutrition in Banjar District. The findings indicate a moderately strong positive link between these variables. Nurses can provide education for parents regarding the importance of children's nutrition knowledge from birth to 1000 days of life to prevent stunting and train parents to prepare nutritious food while considering nutritional values during the first 1000 days of life.

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CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

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