



# The analysis of stunting event factors in children aged 24-59 months based on transcultural nursing

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## Abstract

Stunting in infants is an indication of chronic malnutrition as a result of a bad condition that lasts long from birth. Stunting that occurs in the First 1000 Days of Life can increase mortality and impaired body functions. Malnutrition in toddlers can also arise due to the culture, habits, and social community related to food intake. Madura is known as a patriarchal society and considers culture as an identity in behavior, including health behavior. The purpose of this study was to analyze the incidence of stunting in children aged 24-59 months based on Transcultural Nursing. This research used a descriptive-analytic design with a cross-sectional approach. The number of respondents was 97 mothers with children under five (24-59 months with a simple random sampling technique). The dependent variable of this study was the stunting event. The independent variable consisted of technological factors, family and social support, cultural values and lifestyle, economy, and mother's education. Data collection using microtome and questionnaires and analyzed using chi-square statistical tests with significance level  $\alpha < 0.05$ . There was a relationship between technological factors ( $p=0.045$ ), family and social support factors ( $p=0.048$ ), cultural values & lifestyle ( $p=0.013$ ), and economic factors ( $p=0.034$ ) with the incidence of stunting in infants. Future studies are recommended to conduct further research on transcultural nursing-based interventions as an early effort to prevent and manage stunting in mother's economy and education.

**Keywords:** malnutrition, nutritional status, stunting, transcultural nursing

Yunitasari E, Winasis NP, Suarilah I (2020) The analysis of stunting event factors in children aged 24-59 months based on transcultural nursing. *Eurasia J Biosci* 14: 2715-2720.

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## INTRODUCTION

Malnutrition during childhood with or without recurring illness will cause a stunted body shape in adulthood (Narendra, Sularyo, Soetjningsih, Ranuh, & Wiradisuria, 2002). World Health Organization (WHO), in 2005 stated, stunting is one form of undernutrition that is characterized by height according to age measured by standard deviations by reference. Height indicators, according to age, indicate chronic nutritional problems as a result of long-standing conditions, for example, poverty, life behavior, and poor parenting or feeding patterns since the child was born, which causes the child to experience stunting (Anindita, 2012; Scheffler et al., 2019). Stunting occurs when the fetus is still in the womb, and became apparent in two years age. The highest incidence of stunting in Indonesia occurs in children aged 24-59 months (Agho, Inder, Bowe, Jacobs, & Dibley, 2009; Ardiansyah, Indriasari, Panghiyangani, Husaini, & Noor, 2018).

The 2017 Global Nutrition Report shows that Indonesia ranked twenty-seventh in the world and ranked ninth in Asia for the prevalence of children with stunting by 36.4% in 2013 (Hawkes, 2017). Based on the results of the PSG, the nutritional status report of

children 0-59 months in the short and very short categories show an increase in prevalence from 29% in 2015 to 29.6% in 2017. It means that not maximal growth is suffered by one in three children under five in Indonesia (Kemenkes, 2018). Based on the 2017 PSG data, the percentage of short and very short toddlers in East Java was obtained by 26.7% (Kemenkes, 2018). Bangkalan is one of the districts that have a very high stunting prevalence category of 43% compared to other areas on Madura Island, namely Pamekasan (42.5%), Sumenep (32.3%), and Sampang (26.4%) (Kemenkes, 2017).

Cultural or tribal backgrounds and social life systems differ from one another influence on the behavior systems and patterns of behavior and social networks of a particular community, including eating habits. Nutrition problems, especially malnutrition in children under five, which have an impact on the growth and development. The issue could arise due to the culture, habits, and social community towards food such as diet and

Received: September 2019

Accepted: April 2020

Printed: August 2020

restrictions (Adriani & Wirjatmadi, 2012). Indonesia's Culture related to health is vibrant and diverse. One area in East Java, Madura, is also known to have a distinctive, unique religion and the cultural identity is considered to be the identity of each Madura ethnic individual in behavior and society. Madura is known as a patriarchal society, where women do not have a significant position, this can be seen from the limited access of women to health education and health services, even when the mother is pregnant (Adriani & Wirjatmadi, 2012). Inadequate nutritional compliance during pregnancy and the lack of knowledge of the mother affects the occurrence of stunting during the age of 6-18 months (Ibrahim & Faramita, 2015). Some cultures in the Madurese are related to maternal and child health. In the postpartum period, for example, the practice of removing colostrum because it is considered dirty. A few hours after birth, the baby begins to introduce foods other than breast milk, including honey and young coconuts, which are considered beneficial to smooth digestion so that the baby can receive any food provided. There is also a culture named "ater", the purpose is to make baby growing big and strong by feeding rice or bananas to a less than 6 months infant (Hidayat, Nasrullah, & Festy, 2017).

The Madurese are famous for their people who are stiff with the ancestral culture and customs. Therefore problem analysis with a transcultural approach is needed (Munawara, Yasak, & Dewi, 2015). Transcultural Nursing is a theoretical model described by Leininger in 2002 that can be used to identify the determinants of stunting events (Leininger & McFarland, 2002).

Based on the description above, the cultural dimension in Madura is powerful. Therefore an analysis of problems with a cross-cultural approach is needed. The factor of stunting in infants and its relation to factors in Transcultural Nursing cannot be explained yet. Researchers are interested in analyzing the factors related to the incidence of stunting in children aged 24-59 months based on Transcultural Nursing. With high hopes to properly solve this problem some purpose is proposed. First is to provide more comprehensive scientific insights to the community, especially mothers or expectant mothers and health workers regarding prevention and care nursing children with stunting. Second is to design further malnutrition control programs.

## MATERIALS AND METHODS

The study used a descriptive-analytic study design with a cross-sectional approach. Determination of the sample using a simple random sampling technique. A total of 97 toddlers were recruited. This research identifies technological factors, social support, cultural values and lifestyle, political and legal factors, economic

**Table 1.** Distribution of respondent demographic characteristics in the stunting event factor analysis in children 24-59 months based on transcultural nursing

Demographic Characteristics of Respondents	n	%
<b>Mother's age</b>		
<20 years old	3	3
20-35 years old	68	70
> 35 years old	26	27
Total	97	100
<b>Age of Child</b>		
24 - 35 months	43	44
36 - 47 months	28	29
48 - 59 Months	26	27
Total	97	100
<b>Immunization Status</b>		
completed	61	63
Incomplete	36	37
Total	97	100
<b>Family Organization</b>		
Main family	63	65
Extended family	34	35
Total	97	100
<b>Occupation</b>		
Farmers	22	23
Teacher	6	6
Entrepreneur	7	7
Private employees	2	2
Housewife / Not Working	60	62
Total	97	100

factors, and education factors as independent variables. The dependent variable, namely the incidence of stunting in children aged 24-59 months based on Transcultural Nursing theory. This study used an instrument in the form of a questionnaire sheet about technological factors, social factors, and family support, cultural values & lifestyle factors, economic factors, and institutional factors to determine factors associated with the incidence of Stunting in children aged 24-59 months. The statistical analyses was using the chi-square statistical test with a significance value of  $\alpha < 0.05$ . This research has received research ethics-worthy permits from the research ethics committee.

## RESULTS

Based on **Table 1**, the characteristics of respondents are seen from the age of the mother, the majority of respondents aged 20-35 years (70%). Society in this study has an age range that is included in the category of healthy reproduction. In terms of the age of children, the majority of respondents have children aged 24-35 months (44%). The majority of immunization status is completed six times (63%). Most respondents live in the same house with their husbands and children (65%). In terms of mothers' occupation, the majority of respondents are housewives (62%).

Based on **Table 2**, the results of the chi-square test on technological factors and stunting events obtained  $p=0.045$ . Then there is a relationship between technical factors with stunting events. Chi-square test results on social factors with stunting incidence obtained  $p=0.048$ . Then there is a relationship between social factors with stunting incidence. Chi-square test results on cultural

**Table 2.** The relationship between technology factors, social factors, cultural values & lifestyle factors, and educational factors with stunting events based on transcultural nursing in children age 24-59 months.

	Stunting incident				Total		Chi-square test
	Non-stunting		Stunting		n	%	
	n	%	n	%	n	%	
<b>Technological Factors</b>							
Good	19	20	10	10	29	30	p = 0.045
Enough	30	31	3	3	33	34	
Less	25	26	10	10	35	36	
Total	74	77	23	23	97	100	
<b>Social Factors</b>							
Good	43	44	19	20	62	64	p = 0.048
Enough	18	19	4	4	22	23	
Less	13	13	0	0	13	13	
Total	74	76	23	24	97	100	
<b>Factors of Cultural Values and Lifestyle</b>							
Positive	53	55	10	10	63	65	p = 0.013
Negative	21	22	13	13	34	35	
Total	74	77	23	24	97	100	
<b>Economic factors</b>							
High	5	5	0	0	5	5	p = 0.034
Moderate	4	4	5	5	9	9	
Low	65	67	18	19	83	86	
Total	74	76	23	24	97	100	
<b>Education Factors</b>							
Not attending school or not completing basic education	10	10	6	6	16	16	p = 0.572
Basic education	52	54	13	13	65	67	
Middle education	9	9	3	3	12	12	
College	3	3	1	1	4	4	
Total	74	76	23	24	97	100	

values & lifestyle and stunting incidence obtained  $p=0.013$ . Then there is a relationship between cultural values & lifestyle and stunting incidence. Chi-square test results on economic factors and the stunting incidence obtained  $p=0.034$ . Then there is a relationship between economic factors and the stunting incidence. Chi-square test results on educational factors and the stunting incidence obtained  $p=0.572$ . Then there is a relationship between educational factors and the stunting incidence.

## DISCUSSION

Statistical test results show there is a relationship between technological factors with the stunting incidence. According to the theory of Transcultural Nursing by Leininger in 2002, technological factors are one of the factors that influence individual behavior based on culture (Leininger & McFarland, 2002). Health technology is a means of infrastructure that allows individuals to choose or get offers that solve problems in health services (Motee & Jeewon, 2014). The use of health technology is influenced by the attitude of health workers, the needs and interests of the community. Technological factors may include the use of technology to obtain information, exposure to both print and electronic media, infrastructure, and access to health services. Technological factors as sources of information are all things that become intermediaries in conveying information and influencing ability (Ndiokwelu, Nwosu, Ani, Chizike, & Nwabugo, 2016). The rapid development of media technology can be used to promote health. Media can publish about food

supplement advertisements, publications on health programs, and public service announcements that encourage healthy living. The use of media technology not only has a positive impact on society. But have negative impacts such as the constant promotion of formula milk advertisements and instant porridge that can influence mothers to give weaning food before the baby reach six months old. The digestion process in children is inadequate and can cause illness such as repeated infections even progressed to stunting.

Social factors constitute support in principle, emotional or psychological, cognitive or information, and material or facilities provided to mothers in caring for infants to achieve optimal growth and development. The results showed that statistically, there was a relationship between social factors and the stunting incidence. Social support is the ability of families and communities to provide time, attention, and support in meeting physical, mental, and social needs. Social support includes the attention/support of the family to the mother in the provision of food, psychosocial stimulation, and baby health practices (Jang et al., 2017; Utami, Ridwan, & Abdullah, 2018). Social support is classified into four types: emotional support, appreciation support, educational support, and instrumental support (Nursalam & Kurniawati, 2007).

Based on the results of the study showed that there was a significant relationship between the factors of cultural value & lifestyle with the incidence of stunting. According to the theory of Transcultural Nursing Leininger in 2002 states that culture is complex, which contains knowledge, beliefs, arts, morals, laws,

customs, and other abilities, and habits that obtained as members of society (Leininger & McFarland, 2002). Culture & lifestyle affect a person's health behavior, which impact health status. Culture & lifestyle describe the way a person perceives things, behaves, and values things around them. Culture is the norm or action of group members who are studied and shared and provide instructions for thinking, acting, and making decisions. Explains that culture is the way of life of an individual or group regarding the values, beliefs, norms, patterns, and practices that are learned, shared, and passed down between generations (Munawara et al., 2015). Humans tend to preserve culture even though it is abysmal. The respondent's behavior is also supported by its environment, which is a unifying tool in society (Leininger & McFarland, 2002). Cultural views can influence the attitudes, behaviors, and responses that a mother gives to her child. Besides, confidence in meeting the needs of eating plays an important role in maintaining the behavior in controlling one's eating patterns and patterns of mother's led weaning (Mahdiah, Siagian, Aritonang, & Lubis, 2018; Zahiruddin et al., 2016). Cultural negotiation is a nursing intervention, and implementation that is necessary to help mothers adapt. Mother needs to adapt to certain cultures that benefit health (Fatonah, 2016). Such as nurses empower mother to choose and determine a more supportive culture to prevent stunting.

Statistically shows that there is a significant relationship between economic factors and the incidence of stunting. Low income is a risk factor for stunting in infants (Agho et al., 2009; Lestari, Fujiati, Keumalasari, & Daulay, 2018; NI'MAH, 2015). Low economic status is considered to have a significant impact on the likelihood of children becoming thin and short (Nutrition, 2013). Families with good economic status will be able to get better public services such as education, health services, access roads, and so on so that it can affect the nutritional status of children (Bishwakarma, 2011). Besides, family purchasing power

will increase, so that family access to food will be better. According to the Transcultural Nursing theory by Leininger in 2002, a person will make use of the material resources he has to pay for his illness to get well soon. Economic status includes income in the family, other sources of income, and health insurance (Yunitasari, Permanasari, & Pradanie, 2017). Income will affect the family lifestyle. Families with good economic status will practice a more luxurious and consumptive lifestyle compared to families with low economic status. Economic factors related to financial conditions that cause greater purchasing power for food additives (Jang et al., 2017). In the case of supplementary feeding, income is important because the better the family's economy, the purchasing power of supplementary food is easier, conversely the worse the family's economy, the purchasing power of supplementary food will be more difficult. Employment is one of the factors that affect a person's economy (Saleh, Nurachmah, Hadju, As'ad, & Hamid, 2017). Work can make someone gain experience and knowledge, both directly and indirectly. This economic status is closely related to the income obtained. A higher income means a better amount and type of food consumed (Rahayu, Santoso, & Yunitasari, 2015). Economic factors that influence the stunting incidence are closely related to the respondent's work. Most respondents did not work or were homemakers, so they did not get a steady income each month. The income derived from other family members, such as husbands. If the source of income in the family is low, it will affect the selection of nutritious food that will be consumed by the mother (NARENDRA, 2017).

## CONCLUSION

Stunting is closely related to technological factors, family support, economic factors, and cultural and lifestyle values. Interventions to be taken can consider several aspects to support the achievement of stunting prevention targets in culturally sensitive communities.

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