The Relationship between Socio-Economic Factors and Parenting Styles with the Incidence of Stunting in Children

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ABSTRACT
Background: Stunting in children under three years of age tends to be caused by problems with meeting economic needs and poor quality of parenting in the family. This study aims to analyze the relationship between socioeconomic factors and parenting style on the incidence of stunting in infants with the approach of family-centered nursing theory. Methods: This study used a cross-sectional design with a sample size of 100 respondents obtained using purposive sampling. The independent variable of this study was the socio-economic factor and parenting style and the dependent variable was the incident of stunting. Data were collected by questionnaire and analyzed the Spearman rank test with a significant value of p<0.05. Results: The result of this study showed that there was a relationship between social factors (education) and stunting (r=0.026, $p=0.223$). In this study, it showed that there was no relationship between economic factors with stunting incidents ($p=0.784, r=0.028$) and parenting style with stunting incidents both democratic ($p=0.501, r=0.068$), authoritative ($p=0.754, r=0.032$) and permissive ($p=0.691, r=0.040$). Conclusion: It can be concluded that social factors (education) are very influential on the incidence of stunting. Parenting and nutritional status are strongly influenced by the understanding of mothers in regulating health and nutrition in their families. Therefore, education is needed to be able to change behaviors that can lead to improved health nutrition on mother and child.

INTRODUCTION
The incidence of stunting is still a nutritional problem for children under-five. Globally, around 165 million children are stunted in the world (Prendergast & Humphrey, 2014). Based on data from WHO in 2018, Indonesia is one of the countries with a high prevalence of stunting. The average prevalence of stunting under five in Indonesia in 2005-2017 is 36.4% (Kementerian Kesehatan - Ministry of Health/Indonesia, 2016). According to the results of the 2018 Basic Health Research (Riskesdas) the prevalence rate of short and very short toddlers in children under two years of age in Indonesia reached 29.9% (Kementerian kesehatan Republik Indonesia, 2018), while the prevalence of short and very short under five in East Java is still high, namely 32.81% (Kementerian Kesehatan Republik Indonesia, 2018), without exception in Madura Regency. The incidence of stunting is still high because it is influenced by environmental conditions and unsupportive socio-economic status so that it has an impact on and affects the parenting style of toddlers in the area. The results of a preliminary study in one of the areas in Madura District, B of them work as agricultural laborers, farmers, livestock, market traders, cart pullers. For the status of the settlement itself, the average building is privately owned but with simple conditions, this area is still dominated by dry and arid land so it is often dusty during the dry and windy season.

The condition of failure to thrive in children under five (infants under five years) or what is known as stunting is a result of chronic malnutrition so that the child is too short for his age (Sumiati et al., 2020). Hal This condition since the baby is in the womb and the early days after the baby is born. Usually, this condition of stunting is not seen until the age of 2 years. Toddlers with stunting will have a level of intelligence that is not optimal, can make children more susceptible to disease, and in the future the risk of lowering productivity levels. So that stunting can generally result in the stagnation of economic growth, increase poverty, and widen inequality (Tim Nasional Percepatan Penanggulangan Kemiskinan, 2017). Several factors are associated with the incidence of stunting in children under five, including low birth length, children who do not receive exclusive breastfeeding, low family income, low maternal education, and poor knowledge of maternal nutrition. (Masibo & Maloka, 2012). The health and nutritional conditions of the mother before and during pregnancy and after childbirth affect fetal growth and the risk of stunting. Other factors affecting the mother are the mother's posture (short), the pregnancy is too close, the mother is still a teenager, and the lack of nutritional intake during pregnancy. (Kementerian Kesehatan - Ministry of Health/Indonesia, 2016). Stunting can be caused by multi-dimensional factors and not only due to poor nutrition experienced by pregnant women and children under five (Lestari et al., 2018). Some of these factors are poor parenting practices, limited health services including ANC (Ante Natal Care) services, quality Post Natal Care and quality early learning, lack of family access to nutritious food, and lack of access to clean water and sanitation (Tim Nasional Percepatan Penanggulangan Kemiskinan, 2017). The socio-economic and sanitary conditions of the residence will be related to the occurrence of stunting because economic conditions are closely related to the ability to fulfill nutritious intake and health services for pregnant women and toddlers. Meanwhile, sanitation and food safety can increase the risk of infectious diseases (Kementerian Kesehatan - Ministry of Health/Indonesia, 2016).

Keywords: Socio-economic, Parenting style, Stunting Children

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The level of family income has a significant relationship with the incidence of stunting, low economic status is considered to have a dominant influence on the incidence of wasting and stunting in children (Sumiati et al., 2020). Parents with sufficient income can provide nutritious and varied food (Nasrul et al., 2020). With a good economic status, you will also have access to good health services (Ulflana et al., 2019). Whereas those in low economic status tend to consume food in less quantity, quality, and variation (Setiawan, Eko; Machmud, Rizanda; Masrul, 2018).

Toddlers aged 12-36 months are included in the nutritionally vulnerable group, at this time they also experience a relatively rapid growth process (Sumiati et al., 2020; Vaozia, Syifa, 2016). If this happens during the golden period it will cause the brain to not develop optimally and this condition is difficult to recover. The parenting style referred to in this study is the practice of feeding (Yuarnistra et al., 2019). Mothers with stunted children have a habit of delaying feeding their toddlers. In addition, to provide food to toddlers without paying attention to their nutritional needs. This condition causes poor food intake for toddlers in terms of quality and quantity, so they are prone to stunting. Because the quality of food consumption will increase the adequacy of nutrients, and this is one of the factors that can affect the nutritional status of toddlers (Widyaningsih et al., 2018).

A family consists of two or more people who live together, have regulatory and emotional attachments where each individual in it has a role that is part of the family and lives in one household (Efendi & Makhfudli, 2010). The family has functions including affective function, socialization function and socializing place, reproductive function, economic function, and health care or maintenance function. (Hanifah et al., 2017) The economic function of the family is related to the fulfillment of clothing, food, and shelter. Families with stunting children tend to have less income so that the economic function does not run optimally. Meanwhile, health care and maintenance functions are related to toddler care practices. Mother has a role in the incidence of stunting because food intake in toddlers is completely regulated by the mother (Erisman et al., 2017). Mothers with good parenting tend to have toddlers with better nutritional status than mothers with less parenting (Putri, R. F., Sulasri, D., & Lestari, 2015). The purpose of this study was to analyze the relationship between socioeconomic factors and parenting styles against the incidence of stunting in toddlers.

**METHOD**

This research design was non-experimental (observational) with a cross-sectional approach. The population in this study were subjects who meet predetermined criteria. The population in this study were mothers with toddlers aged 12-36 months in the working area of Puskesmas Pilangkenceng, Madiun Regency, as many as 150 people. The inclusion criteria in this study were mothers who came to the Maternal & Child Health Centre (POSYANDU) with toddlers aged 12-36 months, while the exclusion criteria were respondents who resigned as research samples while the study was ongoing. The sampling used in this study is nonprobability sampling with a purposive sampling technique and found 100 respondents of mothers and children. The dependent variable in this study was socio-economic factors and parenting style, while the independent variable was the incidence of stunting in children under three years old. This research instrument using a questionnaire. The variables of social factors and economic factors were measured using a questionnaire adopted by researchers from Dwivaradani (2017). Meanwhile, parenting style uses the Parenting Styles and Dimensions Questionnaire-Short Form (PSDQ) questionnaire from Robinson et al (1995). The parenting style questionnaire consists of 30 question items with three indicators, namely Authoritarian, Permissive and Democratic parenting. The data analysis of this study used the Spearman rho test (p-value ≤ 0.05). This research has been through ethical approval at the Faculty of Nursing, Airlangga University.

**RESULT**

The Characteristics of mothers and toddlers found that the majority of mothers are in the early adult group as many as 69 people (69%), the number of toddlers is dominated by boys as many as 52 people (52%). Based on the data above, the majority of mothers do not work because their husbands have worked, namely, as many as 35 people (35%) and the level of education of mothers is more secondary education graduates, 75 people (75%).

**Table 1 The Characteristics of Respondent (n=100)**

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<th>Characteristics</th>
<th>Category</th>
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<td>Early Adult</td>
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<td></td>
<td>Late Adult</td>
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<tr>
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<td></td>
<td>Middle education</td>
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<td>High Education</td>
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Based on the results of statistical analysis using the Spearman rho test, the results obtained were \( p = 0.026 \). The \( p \)-value less than 0.05 indicates that there is a significant relationship between the incidence of stunting and social, especially maternal education. It is known that 50 mothers from middle education have children with stunting conditions, on the other hand, at the same education level 15 mothers do not have stunted children. The mothers from low and high education have relatively fewer incidents than those in secondary education.

The relationship between the economic level and the incidence of stunting using the Spearman rho test (\( p < 0.05 \)) resulted in \( p = 0.784 \). The \( p \)-value greater than 0.05 indicates that there is no significant relationship between the incidence of stunting and the socio-economic status in this study. It was found that 34 mothers with high economic status, had stunting children under five. In addition, 31 middle-income mothers also had toddlers with stunting, although the number was not as high as those from high income. Mothers with high income have 14 children who are not stunting.

The results of the relationship between democratic parenting and the incidence of stunting show that the minimum value of this variable is 24 and the maximum value is 50. Democratic parenting has an average value of 38.17 and a standard deviation of 5.503 which is smaller than the average value. shows that the variable of democratic parenting does not have sufficient variation. The results of statistical analysis using the Spearman rho rank test showed a value of 0.501, which means that this variable has no relationship with the stunting incidence variable because the \( p \)-value is greater than 0.05. The strength of the correlation is 0.068 which indicates very weak strength.

The correlation between authoritarian parenting and the incidence of stunting has a \( p \)-value of 0.754 which indicates that there is no relationship between authoritarian parenting and the incidence of stunting in children under three years of age who participated in the study. The standard deviation value is 4.709 and the mean is 37.10, which means that the data is less varied because the standard deviation value is smaller than the mean. The minimum value for the authoritarian parenting variable is 23 and the maximum value is 47.

Permissive parenting has an average value (mean) of 31.15. The standard deviation of the data is 5.469 which is smaller than the mean, indicating that the data is less varied. The lowest (minimum) value in this variable is 16 and the maximum value is 43. Based on the results of the Spearman test, it was found that permissive parenting was not related to the incidence of stunting as evidenced by the \( p \)-value of 0.691. The strength of the relationship between permissive parenting and the incidence of stunting is very weak, indicated by the correlation coefficient (\( r \)) of -0.040.

**DISCUSSION**

This study shows that there is a relationship between the incidence of stunting and social factors. Family-Centered Nursing as a model states that the family is the best health center (Roberts, 2010), besides being a health center, the family is also a place to educate children to interact, grow, and develop (Suciningtyas et al., 2019). The level of maternal education is related to the level of knowledge about health care, the process of pregnancy, postpartum, and awareness of the health and nutrition of children and families. Education is
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needed so that individuals are more responsive to a problem (Kim et al., 2017).

Education accelerates the absorption of knowledge, but knowledge does not come from formal education such as schools. Knowledge is formed due to various factors such as education, sources of information, access to information, and environmental conditions. Knowledge is an indirect factor that affects the nutritional status of children under five and has an important role. Nutritional disorders occur because of inadequate knowledge of the need for additional nutritious food (Soetjiningsih, 2012). Knowledge takes part in the accuracy of feeding so that children can grow and develop properly according to their age and ignorance of nutrition information can lead to a lack of food nutritional quality that consumed by children (M. et al., 2016).

The level of mother’s education can influence the mother’s decision to allocate family resources (Rahman et al., 2016; Yuarnistira et al., 2019). Mothers with low education usually find it difficult to accept new things and tend to be conservative, relying on what the elders conveyed, even though it is not entirely outdated. Mothers with higher education are more open to development, the weakness of this is the premature of adaptation so they tend to take practical action which sometimes creates a dilemma when it comes to child nutrition problems because mothers prefer practical and fast products in the serving process and do not confiscate much time (Purwaningtyas et al., 2019).

The results of this study indicate that there is no relationship between the incidence of stunting and economic factors, meaning that the incidence of stunting is not only from economic factors but also other factors that contribute to the acceleration of the incidence of stunting. One of the economic statuses of a family can be seen from the income of a family. Family income is one of the factors that determine family consumption. Infants and children under five are groups that are very sensitive to the quality of family food consumption. Income and food prices are always factors that parents consider when trying to meet their children’s nutritional needs (Kim et al., 2017). The assessment of economic functions can be seen from 3 indicators. The first is seen from the ability of the family to allocate money to meet family needs such as clothing, food, shelter, and health care. Second, it is seen from how the family distributes sources of income. Third, it is seen from whether the source of income is easy to obtain and fulfills family needs (Friedman, 2010).

Children are not stunted if the body has adequate nutrition, allowing physical growth, brain growth, and general health at optimal levels. Underweight status occurs when the body is deficient in one or more essential substances (Tahangnacca et al., 2020). The results showed that there was no relationship between economic factors and the incidence of stunting. This result is in line with previous research that economic factors are not related to the incidence of stunting, this is because high income does not always improve the nutritional quality of food, high income increases the opportunity to choose the preferred food ingredients, even though the food is not highly nutritious. Some families with high incomes tend to buy food of poor quality, which can affect the nutritional status of the child (Anwar Ibrahim, Irviani, 2015).

The results showed that there was no relationship between authoritarian parenting factors and the incidence of stunting. Authoritarian parenting is a parenting style that is forcing children without paying attention to the wishes of the child and is a one-way parenting style (Yazdani, S. and Daryei, 2016). In practice, authoritarian parenting is very strict so that children always comply, even if they violate, they will get strict sanctions, this has a positive impact on their nutritional needs so that monitoring of children’s nutritional needs is always fulfilled. So it is not the type of parenting (authoritarian) that causes the high incidence of toddler stunting, but there are other supporting factors. This is in line with previous research which states that parenting is influenced by the level of mother’s education, the higher the mother’s knowledge of nutrition will determine the mother’s behavior in providing food for her child (Ardiyah, Farah Okky; Rohmawati, Ninna; Ririanty, 2015). Mothers with good nutritional knowledge can provide the appropriate type and amount of food to support children’s growth and development (Rahmadiyah, 2018; Purwaningtyas, 2015). Democratic parenting also has no relationship with the incidence of stunting. Parenting patterns are important in the process of child development. One of the factors that influence the growth and development of children is the existence of children’s psychosocial factors. Good parenting is illustrated by the positive interaction between parents and children, which creates good emotional development for children. Democratic parenting is a form of parenting that tends to provide freedom to children but still provides rules and guidance to children (Anggraini, Anggraini; Hartuti, Puji; Sholihah, 2017). Parents with a democratic parenting style seem to give freedom to children while still paying attention to children’s development including children’s nutrition. The emergence of child development problems in democratic families does not mean that the family is wrong in applying a pattern, but the factor of economic status is also one of the considerations (Aritonang et al., 2015).

The results of this study indicate that there is no relationship between permissive parenting and the incidence of stunting. Permissive parenting is a parenting style that tends to give children freedom, allowing them to behave as desired without giving rules (Bee, H. and Boyd, 2006). The mother’s parenting style is related to the incidence of stunting in toddlers because the food intake for toddlers is regulated by the mother. Mothers with proper parenting tend to have toddlers with better nutritional status than mothers with inappropriate parenting. However, in this study, if the mother uses permissive parenting, it is not certain that the child is stunted because other factors also affect such as economic limitations, maternal knowledge, and local culture (Lestari et al., 2018). The limitation of this study was that this research only examines one of the working areas of the public health center (PUSKESMAS) in Madiun district.

CONCLUSION

Social factors have a contribution to the incidence of stunting, especially the education factor. Meanwhile, family economic status has no relationship with the incidence of stunting. The results of this study prove that the parenting style applied by mothers to children is not related to the incidence of
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stunting, either authoritarian, permissive, or democratic parenting style. Based on the results of this study, it is necessary for health workers, especially nurses, to prevent stunting by educating mothers to increase knowledge about stunting prevention.

**REFERENCE**


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