The Influence of Local Culture on Mothers During Pregnancy on Stunting Incidence

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ABSTRACT

Introduction: Dietary taboos and maternal beliefs and practices during pregnancy can hurt the culture of the mother and the fetus she contains so that the baby is malnourished and at risk of stunting.

Methods: This study used an observational method with a case-control design. The sampling technique was simple random sampling with mothers under-five aged 24-59 months as respondents at Candi Rejo Health Center, Central Lampung Regency with a total of 114 respondents. The independent variables of the study were the behaviour of maternal dietary restrictions during pregnancy and the beliefs of the mother's cultural practices during pregnancy on the incidence of stunting.

Results, Discussion: The largest age group for toddlers is 24-35 months, and the biological mother's age ranges from 20-38 years. Chi-square statistical test, the effect of maternal dietary restrictions during pregnancy on the incidence of stunting at Candi Rejo Health Center, Lampung Regency, Odd Ratio 72.25. The chi-square statistical test showed that the behaviour of carrying out maternal cultural beliefs and practices during pregnancy on the incidence of stunting at the Candi Rejo Health Center, Lampung Regency with an Odds Ratio of 88,400. Pregnant women who abstain from eating fish are believed by the public that milk will smell fishy.

Conclusion: There is an effect of dietary restrictions on pregnant women on the incidence of stunting and the influence of maternal cultural beliefs during pregnancy on the incidence of child stunting.

Keywords: dietary restrictions, cultural practices, Pregnant Women, Stunting.

INTRODUCTION

Optimal nutrition is an important nutrient and must be considered for pregnant women. Optimal nutritional intake during pregnancy will have an impact on fetal growth. Various societies in Indonesia have diverse cultures related to pregnancy. Indirectly, culture is a factor that can affect the nutritional status of pregnant women, so people need to pay attention to the nutritional needs of pregnant women as a form of social support, especially those who still follow the dietary restrictions that pregnant women must avoid and believe in cultural practices. This belief can have a negative impact on the mother and fetus which can cause under-five children to be malnourished so that they are at risk of stunting (Juariah, 2018). Children are the next generation of the nation who must receive attention so that the development of cognitive, social and emotional behaviour can be optimal, so that children will achieve a good quality of life. The golden period is an important and critical period, which occurs once in a child's life. No less than 100 billion brain cells of children can be stimulated so that children have optimal intelligence in the future. The golden period occurs in the first 1,000 days of life, starting from the time the mother is pregnant until the child is 24 months old (Sugeng, 2019). Early detection is very important so that intervention can be carried out from an early age (the first 1,000 days of life for...
toddlers) and to find developmental deviations in children (Asthiningsih & Muflihatin, 2018).

In 2017, half of stunted children under five in the world came from Asia (55%) while more than a third of them were African (39%) and the 2018 Riskesdas data showed that 30.8% of children under five were malnourished in Indonesia. The stunting rate is high in the eastern region of 42.6% in East Nusa Tenggara and 17.7% in the western part of Indonesia in DKI Jakarta (Kementrian Kesehatan RI, 2018). This figure shows a decline in stunting in children under 24 months of age in 2019, which has approached the 2019 RPJMN target of 28% (Bappenas RI, 2019), in the context of accelerating the achievement of reducing the prevalence of stunting, the target to be achieved is 14% (fourteen percent) in 2024 (Peraturan Presiden Republik Indonesia Nomor 72 Tahun 2021 Tentang Percepatan Penurunan Stunting, 2021). In Lampung Province the prevalence of stunting under five in 2019 was 27.28% and the district with the lowest prevalence of stunting was Metro City 14.75% and Way Kanan Regency the highest 36.07%. Based on the report from the Central Lampung District Health Office in 2019, it was in 6th place with a prevalence of 25.32%. (Dinkes Lampung, 2019). According to data from the Central Lampung Health Office in 2020, Way Pengubuan District, Banjar Kertarahyu Village, has a prevalence of 12.55% and the number of stunting children is 59 children (Dinas Kesehatan Lampung Tengah, 2020). The purpose of the study was to determine the effect of maternal dietary restrictions and local culture on the incidence of stunting.

METHOD

The research design used observational with case control design. A case control study is a research design to determine the relationship between exposure and disease by comparing the case group and control group based on their exposure status. The population in this study were toddlers aged 24-59 months, with their biological mothers as respondents in the Candi Rejo Community Health Center, Central Lampung Regency. The number of samples as cases as many as 52 stunting toddlers, to anticipate respondents leaving the study, the number of case samples was added to 10% (57 respondents), as well as the number of respondents in the control group as many as 57 respondents who had mothers who had toddlers who were not stunted in the Candi Candi Work Area. Rejo. The number of samples in this study were 114 respondents. The inclusion criteria in this study were biological mothers of children aged 24 to 59 months who were still alive, mothers who during pregnancy participated in activities at integrated service posts at least three times in a row (data on the presence of mothers and babies in integrated service posts were obtained from the Maternal Health Book). and Children, mothers who have babies with normal birth weight, mothers who have babies born according to gestational age. Exclusion criteria in this study are mothers of toddlers who experience health problems, toddlers suffer from congenital diseases, and parents who are not willing to fill out the informed consent form. Data collection using a questionnaire filled in by the child's biological mother and validation of stunting status was carried out by re-measurement of toddler's height based on age. Then secondary data was taken from the results of data analysis recorded by Candi Rejo Health Center. To determine the effect of two independent variables on toddler stunting status using chi-square analysis with a significant level of p-value (α=0.05).

RESULTS AND DISCUSSION

The frequency distribution of the most under five age groups at the age of 24-35 months amounted to 40 toddlers (35%), and the age of the biological mother ranged from 20-38 years. Research by (Ruaida & Soumokil, 2018), that the highest percentage of stunting in the age group 24-35 months was 43 toddlers (41.3%). The age of the mother of toddlers between 20-40 years is classified as an age with good memory abilities. A person's memory decline is a symptom that is most often found in the elderly, especially over the age of 40 years (Marpaung et al., 2017), Memory ability for parents is one of the important factors in child care, so that children are guaranteed a parenting pattern in terms of providing nutritious food and other healthy lifestyles. Mothers under five during pregnancy there has been an average weight gain of 10-12.5 kg in the second and third trimesters. Weight gain during pregnancy has an important role for fetal growth because the fetus...
absorbs nutrients from the mother early in pregnancy and affects the health status of the child (after birth) until adulthood (Erowati, 2019). The weaning phase occurs at the age of 24 months and is a period of getting to know the surrounding environment with a fairly high level of activity and toddler's gross motor skills are developing rapidly. This age is a stage that is vulnerable to the health of toddlers so that toddlers will face several possibilities that cause nutritional deficiencies, including decreased appetite for children, low nutritional intake, reduced sleep hours, susceptible to infection when mothers or caregivers pay less attention to hygiene and sanitation (Setyawati VAV, 2018).

Table 1. Characteristics of toddlers

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Months)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24-35</td>
<td>40</td>
<td>35.1%</td>
</tr>
<tr>
<td>36-47</td>
<td>37</td>
<td>32.5%</td>
</tr>
<tr>
<td>48-59</td>
<td>37</td>
<td>32.5%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>58</td>
<td>50.9%</td>
</tr>
<tr>
<td>Woman</td>
<td>56</td>
<td>49.1%</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 1 describes the age of most toddlers at the age of 24-35 months (40 toddlers; 35.1%) while the sex proportions of toddlers are relatively the same. Male gender under five in the case group (stunting) had a high proportion (58 toddlers; 50.9%), this condition agrees that growth in girls occurs faster and in boys (Lestari ID, Ernalia Y, 2016). The increased need for nutrients compared to women is due to the fact that men have a larger body surface area and posture so that men have different energy needs due to differences in activity and body composition (Widnatusifah, 2020). More muscle mass in men, while more fat mass than muscle mass in women (Suhada, 2021). The results of this study that the incidence of stunting in male toddlers is greater than the incidence of stunting in girls can be caused because male toddlers are more active in playing outside the house in general and in contact with dirty environments such as running, this may occur, this consumes energy intake that is high. more while the energy intake is limited (Angelina C, Perdana AA, 2018). This study also agrees with research by Rufaida FD, Raharjo AM, 2020, that the incidence of stunting in the three villages of the Sumberbaru Health Center Jember tends to be male toddlers (Rufaid FD, Raharjo AM, 2020).

Table 2. Food taboos during pregnancy

<table>
<thead>
<tr>
<th>Maternal food taboos during pregnancy</th>
<th>Child Stunting Status</th>
<th>OR (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Case n%</td>
<td>Control n%</td>
</tr>
<tr>
<td></td>
<td>51 (89.7%)</td>
<td>6 (10.5%)</td>
</tr>
<tr>
<td>Apply</td>
<td>6 (10.5%)</td>
<td>51 (89.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>57 (100%)</td>
<td>57 (100%)</td>
</tr>
</tbody>
</table>
Based on table 2, the results of the chi square statistical test were obtained with p-value = 0.001 (p<α), with an explanation that there was an effect of maternal dietary restrictions or prohibitions during pregnancy on the incidence of stunting at Candi Rejo Health Center, Central Lampung Regency with an Odd Ratio (OR) value 72.25. The influence of mother’s behaviour in implementing recommendations for dietary restrictions during pregnancy has 72 times the risk that their children will become stunted compared to mothers who do not apply dietary restrictions during pregnancy. Types of dietary restrictions during pregnancy, in this study were not allowed to eat black sticky rice, not allowed to eat sea fish, not allowed to eat salted fish, not allowed to eat bamboo shoots, couldn't eat taro leaves, couldn't eat jackfruit vegetables, couldn't eat fruit, pineapple, you can't eat durian, you can't eat chili, and you can't drink sweetened iced water/sugar.

Research on dietary restrictions with nutritional status in third trimester pregnant women (p = 0.002; = 0.05) was conducted by (Susanti A, Rusnoto, 2013) with the results that the factor of abstinence from food during pregnancy shows a relationship with the incidence of Chronic Energy Deficiency which causes stunting. Based on research Ruaida & Soumokil, 2018, that more stunting toddlers (68.8%) are mothers who have a history of SEZ, while more toddlers who are not stunted (58.3%) so that chronic energy deficiency is a factor causing stunting and food abstinence only applies to the group in a certain population and at a certain time. If the pattern of abstinence applies to the entire population and throughout its life, nutritional deficiencies tend not to develop as if the taboo only applies to a certain group of people during one stage in the cycle (Susanti A, Rusnoto, 2013). The mother’s abstinence from eating during pregnancy believes that society can bring badness or difficulties during childbirth. Research by Huda N et al., 2019. In general, the reason pregnant women abstain from eating is because the impact of the food consumed affects the health of the mother and baby for cultural reasons because many customs, habits, and beliefs are closely related to food. Indonesia has various ethnic groups and has its own way of choosing the type of food consumed so that it has an impact on the nutritional status of pregnant women if it is not balanced with substitute foods and becomes a factor causing stunting. Eating culture shows that pregnant women have taboos on pineapple, because it is believed to cause the uterus to feel hot and cause miscarriage. In theory, pineapples are high in vitamins and minerals and contain bromealin, an enzyme that weakens the cervix, so it shouldn't be consumed in excessive amounts. Misunderstanding that occurs in society that pineapple can cause miscarriage. Pineapple has many benefits for pregnant women as a source of vitamin C and other vitamins and minerals such as vitamins A and B6, folate, iron, magnesium, potassium, manganese and collagen needs for pregnant women, so that it can provide a source of nutrition for the growth of skin, bones, , and other body parts (Muthoharoh H, 2015). Pregnant women abstain (forbidden) to eat black sticky rice is believed to cause back pain. Sources of carbohydrates are quite high and low fat content and rich in fiber which is good for digestion is one of the benefits of black sticky rice (Huda N et al., 2019).

Pregnant women who abstain from eating fish are believed by the public that milk will smell fishy. Fish is a potential source of protein compared to other sources of animal protein, an important nutrient that plays a very important role in maintaining a healthy body, namely omega fatty acids. In addition, fish is also a source of very important mineral nutrients (calcium, phosphorus and iron). Pregnant women do not eat salted fish, people believe it will cause the baby's skin and can cause itching in babies born. The content in salted fish contains nutrients such as fat, iron which is useful for producing red blood cells in the body, and iodine, but it is not recommended to consume salted fish in excess. In addition, bamboo shoots are low-glucose foods that contain protein, and are rich in vitamins and minerals. The vitamins contained in bamboo shoots include vitamin A, vitamin B6, vitamin E, thiamin, riboflavin, niacin, folic acid, and pantothenic acid, and the mineral content includes calcium, magnesium, zinc, copper, manganese, selenium and iron. The belief of pregnant women to abstain from eating taro vegetables can cause the mother and baby to experience itching. Taro is a source of carbohydrates and has three times the amount of
fiber and contains protein, iron, vitamin C, and vitamin A. The reason pregnant women abstain from eating jackfruit is because the production of breast milk after giving birth will decrease. Calories contained in young jackfruit two times lower than ripe jackfruit. In addition, young jackfruit also contains minerals such as calcium and phosphorus, as well as vitamins such as vitamin A and vitamin C (Huda N et al., 2019). Consuming durian in moderate amounts in pregnant women does not harm pregnancy because it contains high enough carbohydrates and fiber, protein, vitamin C and B vitamins, and minerals. The reason pregnant women abstain from eating chili is because it can cause the stomach to become hot and the baby's skin to turn red. Spicy food does not harm the development of the fetus in the womb but affects the condition of pregnant women because eating too much spicy food can cause irritation to the stomach. Chili or chili has a very high vitamin C content and contains vitamin A, vitamin B, and vitamin E, and contains minerals such as magnesium, potassium, folate, and manganese (Huda N et al., 2019).

The reason pregnant women abstain from eating ice is because it causes the baby to gain weight and can make it difficult to give birth. The need for important fluids to maintain the health of pregnant women and fetuses in the content of ice water that makes babies big is when mixed with high glucose such as sugar or syrup, because foods or drinks with excessively high glucose can make the fetus large (Huda N et al., 2019). Food taboos and misconceptions about dietary prohibitions can have a negative impact on the nutrition and health status of pregnant women as well as on the health, development, and health status and growth after the birth of their child. In Gebrearegay's research, some pregnant women are prohibited from consuming foods such as grains such as kollo, and legumes such as beans and chickpeas because they are believed to cause abdominal cramps during labor, prolong labor, and cause abdominal cramps in newborns. Avoiding grains and legumes as such could have a negative impact on the dietary intake of these women, whereas dietary diversity recommendations for pregnant women are particularly important on a diverse diet so that energy, protein, fat, fiber and micronutrients are adequate (Agbozo et al., 2020). Dietary restrictions during pregnancy may influence the dietary practices of pregnant women with their belief that eating these foods will cause harmful effects on the pregnancy and fetus. The prevalence of taboo eating behavior among pregnant women is high, possibly due to the low literacy rate who live in rural areas. Common foods that are often avoided include chicken, eggs, beef, spices (masala), dates, dried figs, fish because they are considered hot foods and they believe that foods rich in protein cause miscarriage, premature birth and bleeding (Urielle et al., 2021).

Table 3. Belief in cultural practices during pregnancy

<table>
<thead>
<tr>
<th>Belief in cultural practices during pregnancy</th>
<th>Child Stunting Status</th>
<th>OR (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Case n%</td>
<td>Control n%</td>
</tr>
<tr>
<td>Apply</td>
<td>52 (89.7%)</td>
<td>6 (10.3%)</td>
</tr>
<tr>
<td>Not applying</td>
<td>5 (8.9%)</td>
<td>51 (91.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>57 (100%)</td>
<td>57 (100%)</td>
</tr>
</tbody>
</table>

Based on table 3, the results of the chi square statistical test with p - value = 0.001 (p < 0.05) indicate that there is an influence of the behaviour of carrying out maternal beliefs and cultural practices during pregnancy on the incidence of stunting in Candi Rejo Health Center, Central Lampung Regency with Odd Ratio 88,400. The behaviour of mothers who practice cultural beliefs and practices during pregnancy is at risk of becoming stunted compared to mothers who do not practice cultural beliefs and practices during pregnancy. In this study, what is meant by the mother's cultural beliefs and practices is to give breast
milk to children only when the child asks for it, during pregnancy they are not allowed to move out of the house a lot, during pregnancy they are not allowed to wait including not to mop the floor, toddlers do not need immunizations, breast milk the first time it is discarded it is considered dirty, feeding bananas (similar) to children aged 6 months, giving prelacteal food when a new born is born, and when pregnant they are not allowed to leave the house at night.

Research on maternal cultural beliefs and practices during pregnancy conducted by Ilahi & Muniroh, 2018, with the results showing that there is a relationship between belief in behaviour and cultural practices of Madurese ethnic nutrition (socio-cultural nutrition) with the incidence of stunting (Ilahi & Muniroh, 2018; Sutarto & Indriyani, 2018). Infants aged six months can be given complementary foods to breast milk before the age of six months is not recommended because the digestive enzymes and the baby's intestinal immune system are not yet fully developed so starch and protein cannot be digested by the baby. Mothers do not give colostrum because they are considered dirty by mothers, mothers of toddlers should not throw away colostrum. Babies who do not get colostrum have a lower immune system when compared to babies who are given colostrum. Protection of infants against infectious diseases is a function of the immune system and infectious diseases are positively related to the nutritional status of infants, indirectly giving colostrum to infants has an impact on the nutritional status of infants (Untari & Mayasari, 2015). Prelacteal food can replace colostrum as the earliest food for the baby it is not recommended. New born who are given prelacteal food means that they do not receive exclusive breastfeeding which are included in the category of predominant breastfeeding. Obtaining breast milk from the mother but the baby has been given a little water, honey, or other food/drinks at birth and before the milk comes out is the predominant breastfeeding (Sutarto et al., 2021; Widodo, 2014). Pregnant women should not go out at night, because many evil spirits will disturb the fetus. Psychologically, a sensitive and easily afraid mentality is experienced by pregnant women, so traveling at night is not recommended. Medically-biologically, pregnant women are not recommended to go out at night too long, it can harm the mother and fetus, the night air is less able to precipitate carbon dioxide (CO$_2$) (Untari & Mayasari, 2015). CO$_2$ gas increases in the air thereby reducing the freshness and cleanliness of the air. CO$_2$ gas can become air pollution if levels exceed 1,000 ppm, resulting in health problems (Rezki et al., 2013). Infants and toddlers are a vulnerable group who need immunizations to prevent disease and boost their immunity. Toddlers who are not immunized cause their immunity to decrease, resulting in getting sick easily so that toddlers are at risk of becoming stunted (Ilahi & Muniroh, 2018). Research by Putri LNA, 2021, very high cultural beliefs and practices affect the nutritional needs of mothers and babies and risk factors for infections that have an impact on babies to be born, such as low fetal growth and increased risk of neonatal death, the occurrence of low birth weight, increased risk of stunting (Putri LNA, 2021; Sutarto et al., 2019). Taboo behaviour on food is something that still plays a role in the nutritional adequacy of pregnancy and early childhood. In terms of practicing dietary restrictions and behaviours that can make women malnourished, some dietary restrictions also have the potential to protect women from unhealthy foods. Therefore, it is important to understand the dual impact of dietary restrictions in order to develop an effective community-based health care program that is sensitive to local culture (Ramulondi et al., 2021). Maternal nutrition is influenced by dietary beliefs, socio-cultural practices and lies about the function of food and supplements, thereby hindering nutritional intervention (Agbozo et al., 2020).

Taboos on food in the general public are often believed to be something that can harm a person, so that it has a negative effect on these dietary restrictions, especially for women who are experiencing pregnancy. Some of these dietary restrictions can be used as a medium to protect pregnant women from unhealthy eating habits. There is an aspect to understand as a protective/positive factor of dietary restrictions for nutritional adequacy and health status in pregnant women, so that this aspect can be maintained. As cultural traditions develop and eating habits change, there is evidence that people who preserve traditional eating habits are more likely to have better health status than those who face an acculturated diet. Mechanisms or program strategies used to strengthen the spread of dietary restrictions to be
effective by practicing healthy food menus. However, little is known about this strategy in combination with nutrition education provided by health care providers. Society has changed over the years, but family members, friends, and neighbors are still the most trusted sources of information in many cultural traditions especially during pregnancy. While nutrition education programs by health services tend to focus on the individual, it is important to consider the impact that would be made if a program were to be extended to society. This situation occurs in rural areas that adhere to local traditions with limited information, and is conveyed only orally, little is known about the effects of social media on the transmission of this food taboo culture (Irudukunda, 2020). Socio-cultural influence is one of the determinants of a mother’s decision to raise her child through feeding practices. Many interventions are focused on handling malnutrition, but they do not pay attention to maternal health behavior so it is necessary to increase the awareness of mothers and their families about the influence of taboos on cultural practices in society. The intervention focused on domestic life, because cultural norms were a barrier to child care. Educational interventions should be designed to raise awareness of the negative impact of some socio-cultural practices on maternal and child health. It is more beneficial if the authorities provide nutrition education through outreach in the community to increase mother’s knowledge about nutrition, food and child-rearing practices based on local dietary practices. The involvement of men, religious and local authorities, as well as older women (grandmothers), this community group becomes a great asset in regulating diet while respecting environmental culture (Urielle et al., 2021). Taboos on eating certain foods and misconceptions about food consumption are associated with high rates of malnutrition. In addition, it plays an important role in influencing the nutritional adequacy or diet of pregnant and lactating women, infants and toddlers. Food taboo in the general public no longer gets the attention of many people. Some families or adherents of certain religions judge certain foods that are suitable for consumption and which are not. Explore the understanding of dietary restrictions they know. Taboos during pregnancy and lactation (women) are foods that they eat especially during pregnancy and lactation for the good health of the child, foods that young children should not eat according to cultural beliefs and foods that should not be eaten when sick according to cultural beliefs. They have dietary restrictions such as not eating pork or dogs. One mother said: 'Pig is a taboo for Muslims and some families. Others cite dogs, cats, catfish, hemp sauce with palm oil. No explanation, we got it from the older one (Agbozo et al., 2020).

**CONCLUSION**

There is an effect of maternal dietary restrictions during pregnancy on the incidence of stunting in the working area of Candi Rejo Health Center with an OR of 72. There is an influence of local beliefs / culture on pregnant women on the incidence of stunting in the working area of the Candi Rejo Health Center with an OR of 88.

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