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The Model of Mothers' Caregiving Risk Factors on Keeping Nutritional Status of Children Aged 0-6 Months

Sri Umijati[1,*], Susilowati Andajani[2]

[1]Division of Community Nutrition, Department of Public Health, Faculty of Medicine, Universitas Airlangga, Surabaya 60132, Indonesia
[2]Division of Epidemiology, Department of Public Health, Faculty of Medicine, Universitas Airlangga, Surabaya 60132, Indonesia

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Abstract The risk factor model of maternal care in maintaining the nutritional status of children 0-6 months needs to be found. A total of 86 mothers who had babies aged 0-6 months were sampled in this cross-sectional study. We conducted interviewing and observed parenting risks and measured the child's weight and height. Next, the data were analyzed using Lisrel for Windows 9.1 program. The risk factor model of maternal care in maintaining the nutritional status of children 0-3 months consists of the child's birth weight (t=10.14, γ=0.71 for WAZ and t=2.23, γ=0.37 for LAZ), the incidence of sick child (t=-4.43, γ=-0.28 for WAZ and t=2.48, γ=0.36 for LAZ) and sick child care (t=-10.28, γ=-0.68 for WAZ), while the model for children aged 4-6 months consisted of birth weight (t=2.59, γ=0.31 for WAZ, and t=3.32, γ=0.36 for WLZ) and sick child care (t=2.95, γ=0.31 for WLZ). The risk factor model of maternal care in maintaining the nutritional status of children 0-6 months mainly consists of the child's birth weight and care for sick children. The results of this study are the first step to improve the mother's parenting ability to maintain her child's nutritional status.

Keywords Risk Factor Model of Maternal Care, Nutritional Status, Children Aged 0-6 Months, Child's Birth Weight, Sick Child Care

1. Introduction

The health and nutritional status of children are very dependent on the care of the mother from the time in the womb until the child is born, grows, and develops [1], [2]. Pregnant women with chronic energy deficiency (CED) and anemia will get low pregnancy products such as low birth weight, impaired child growth, the tendency to get degenerative diseases when they are adults, and even death [3].

Based on the Indonesian Basic Health Research (RISKESDAS) [4], the prevalence of children born with a body length of less than 48 cm increased by 2.5%. Similarly, low birth weight children increased by 0.5%. The increasing prevalence shows that there has been an increase in growth disorders in children's early life due to the incidence of pregnant women with CED, which has remained high since 2010, and pregnant women with anemia increased to 48.9% in 2018. Hemoglobin levels during pregnancy are also important for fetal growth [5]. An increase in cases of low birth weight and short children shows that the government's curative efforts in malnutrition prevention programs have not been successful.

Based on a descriptive analysis of the survey results of the Basic Data Assessment of the Nutritional Situation of Toddlers and Mothers, the 2005 USAID WVI Fast Up program [6], revealed that there are still few mothers who can adequately care for sick and healthy children (28.4% and 7.3%). Likewise, only 67.1% of mothers knew about four of the eight signs of undernutrition: thin, weak/less active, sunken eyes, likes to cry/fussy, weight less than

average, wrinkled skin, distended stomach, and dull hair. The results of this survey also show that maternal care in maintaining the nutritional status of their children is still low.

Overcoming nutritional problems is not enough with curative actions that only apply at the time of the incident, but preferably with earlier efforts, namely prevention. Prevention can be pursued through the mother's understanding of the potential risks in parenting, parenting risk factors, and the impact of child nutrition problems. The risk factors of maternal care in maintaining child nutrition need to be known and understood by mothers so that mothers can prevent early childhood malnutrition.

The risk factors of parenting are so complex in maintaining the nutrition of children 0-6 months that they need to be simplified into a model of parenting risk factors [7], [8]. Umijati [6] has found a risk factor model for maternal care in maintaining the nutrition of children 6-60 months but not for children 0-6 months. Based on the Regulation of the Minister of Health of the Republic of Indonesia (RMH-RI) number 66 of 2014, [9] growth monitoring is carried out every three months, so this parenting risk factor model is distinguished for ages 0-3 months and 4-6 months [9].

2. Methods

This cross-sectional study aims to determine the maternal care risk factor model in maintaining the nutrition of children aged less than six months. The model is used for simplicity in analyzing the risk factors of maternal care in maintaining the nutritional status of children in an accurate and complex manner by applying the following points. The first point was theoretical approach to health care and nutrition of children under five (UNICEF, 1998) [10]; the second was results of a survey of risk factors for child care related to their nutritional status, as well as the third point was government policies on handling child nutrition problems [9].

The research locations were in three poor sub-districts of Tambak Sari, Simokerto, and Kenjeran in the Municipality of Surabaya, East Java, Indonesia. Samples were 86 mothers with children aged 0-6 months. Mothers were interviewed about the care for their children, including their children's health and nutritional status and how the mother manages the children's environment. Questions about managing the child's environment can show the health and nutrition of the child as a result of the mother's ability to take care of the child's environment.

We measured the children's weight and length three times for precise measurement results. We also observed the hygiene of infants and mothers; and the sanitation of their environment.

The dependent variable of this study was the nutritional status of children aged 0-6 months. In contrast, the independent variables were the children's health conditions and the risk factors of parenting in maintaining the nutritional status of children. These parenting risk factors include breastfeeding and food, handling infectious diseases, access to essential health services, management of maternal hygiene and environmental sanitation, and child nutrition care.

Furthermore, the causal relationship between the two variables was tested together with the help of the Lisrel program for Window 9.1. to determine the risk factor model of maternal care in maintaining the nutritional state of their children. Establish a parenting risk factor model based on the government's policy for a child development program carried out every three months; a parenting risk factor model is formed for the nutritional status of children aged 0-3 months and 4-6 months.

3. Results

3.1. Baby Nutritional Status

The ratio of the number of baby boys and girls is 1.26. Based on the Z score of the length for age (LAZ), the nutritional status of children aged 4-6 months was related to their gender ($p=0.02$), where more girls (36.9%) suffered from nutritional problems. There appears to be gender inequality in nutritional problem. This study's incidence of malnutrition exceeds that of malnutrition in Indonesia (19.6%).

Based on their age group, there was no significant relationship with the nutritional status of children, on the contrary, with their birth weight. Based on the Z score of the weight for age (WAZ), the child's birth weight was related to the nutritional status of infants 4-6 months ($p=0.006$). In those born with low birth weight, as much as 50% suffer from malnutrition. Birth weight has a role in maintaining child growth until the age of 4 months.

3.2. Baby Care

The following discusses the incidence of infant illness as a result of maternal care for children's health before the study and risk factors for maternal care in maintaining the nutritional state of their children during the study. Most (66.3%) of mothers take care of their babies alone, and 29.1% are together with other family members. As many as 81.4% of mothers take care of babies within 24 hours. 36.8% of mothers aim to maintain the health and growth of their children. Parenting, according to 39.1% of mothers, is helpful for closeness and for maintaining the growth of their children.

3.2.1. Incidence of Sickness in Babies

The incidence of sick babies as a result of the mother's care for her ability to care for sick children. Two weeks before the study was conducted, 62.8% of infants suffered from acute respiratory infections (ARI) and diarrhea. The

incidence of illness was often found in infants aged 4-6 months (81.5%). Based on the Z score of the weight-to-body length (WLZ), there was a significant relationship between sick babies and thin babies in infants aged 0-3 months, (p=0.011). Still, the incidence of sick babies was not associated with birth weight. This result shows that children are thin at 0-3 months because they are often ill.

3.2.2. Risk Factors of Maternal Care in Maintaining the Nutritional Condition of Infants Aged 0-6 Months

3.2.2.1. Nurturing Child Growth

These parenting risk factors describe mothers' empowerment in maintaining their children's growth. Parenting risk factors consist of knowledge of mothers about their baby's growth, how to keep babies growing well, understanding of the role of Integrated Health Center (IHC) for children (Posyandu) in maintaining child health and growth, knowledge of the signs and effects of growth disorders, and mother's activities in maintaining baby growth through weighing children in the IHC.

The results showed that the minimum value of parenting empowerment was 24 and a maximum of 34, with a standard deviation of 2.6. The average weight of this empowerment is 29.1. Suppose parenting empowerment is stated to be good; it is in the value of parenting empowerment more than the average minus one standard deviation. Then based on the baby's age group, 37.5% of mothers with babies aged 0-3 months are less empowered in nurturing their baby's growth, and as many as 10.7% of mothers with babies aged 4-6 months. Parenting empowerment in maintaining infant growth was related to the infant's age (p=0.02) but not associated with the infant's nutritional status (p>0.05). The results showed that mothers with young babies (0-3 months) were more unable to maintain their child's growth.

3.2.2.2. Parenting Breastfeeding

These parenting risk factors describe the empowerment of mothers in breastfeeding their children and consist of breastfeeding and colostrum feeding, ways of breastfeeding and colostrum, the timing of breastfeeding and colostrum feeding, knowledge of breastfeeding and colostrum, and the mother's attitude toward breastfeeding and giving colostrum.

The results showed that the minimum value of parenting empowerment was 14, and the maximum was 19, with a standard deviation of 1.26. The average weight of this empowerment is 19. If parenting empowerment is stated to be good, it is at an empowerment value of more than the average minus one standard deviation. Then, based on the age group of the baby, 15.4% of mothers who have babies aged 0-3 months are less empowered in caring for their babies, while for mothers who have babies aged 4-6 months, as many as 29.7% of mothers. The empowerment of parenting in maintaining the nutritional status of infants is not related to the age of the baby, although descriptively, the older the child, the less capable the mother is in breastfeeding her baby. Empowerment of care for breastfeeding is also not related to the nutritional state of the baby.

3.2.2.3. Parenting Food Feeding, and Beverage

This parenting risk factor describes the mother's empowerment in providing food and drinks other than breast milk. These risk factors include the knowledge and activities of mothers in delivering food and beverages other than breast milk.

The results showed that the minimum value of parenting empowerment was four, and the maximum was six, with a standard deviation of 0.59. The average weight of this empowerment is 5.28. Suppose the mother's empowerment of infant nutrition care is stated to be good at more than the average minus one standard deviation. Then based on the baby's age group, mothers with babies aged 0-3 months have less parenting empowerment, as much as 28.6%; on the contrary, all mothers with babies aged 4-6 months have been powerless. The mother's parenting power for feeding and drinking is unrelated to the baby's age and nutritional status (p>0.5).

3.2.2.4. Sick Baby Care

The risk factors for caring for a sick baby describe the empowerment of mothers in caring for their sick child. The parenting risk factors include the mother's knowledge and activities in caring for sick children. Treatment of sick children starts with the mother's understanding of the symptoms and signs of a sick child, breastfeeding, food or drink when the child is ill and during the healing process, the existence of abstinence from eating when the child is sick, efforts to seek help, treatment, knowledge, and immunization.

The results showed that the minimum value of parenting empowerment was 24, and the maximum value was 93.6, with a mean value of 58.03 and a standard deviation of 17.95. Mother's empowerment in parenting is declared good if the value of parenting is more than the average minus one standard deviation. Then based on the baby's age group, mothers with babies aged 0-3 months have less empowerment, as much as 30%, while for mothers with babies aged 4-6 months, it is as much as15.2% mothers. The mother's caregiving power was related to the baby's nutritional status based on the WLZ (p=0.035) but was not associated with the baby's age (p=0.082).

3.2.2.4. Maintain The Environmental Sanitation and Personal Hygiene

These parenting risk factors illustrate the empowerment of mothers in maintaining the hygiene and sanitation of their child's environment. These risk factors include knowledge and activities of mothers in the use of drinking water, storage and managing clean water, ownership, use and hygiene of latrines, hygiene after babies defecate,

control of baby diapers, use of soap for hand washing, washing, bathing, and eating, managing trash cans, and use of rags.

The results showed that the minimum value of parenting empowerment was 30, and the maximum was 50, with a standard deviation of 5.19. The average weight of this empowerment is 41.45. Suppose the mother's empowerment in environmental care is stated to be good; it is more than the average minus one standard deviation. Then based on the baby's age group, mothers with babies aged 0-3 months have less empowerment, as much as 30%, and mothers who have babies aged 4-6 months have as many as 16.7% of mothers. The mother's ability to care for environmental sanitation and hygiene management is not related to the baby's age (p=0.21). Still, it is related to the baby's nutritional status based on the Z score of the length for age (LAZ) at 0-3 months (p = 0.018). In infants aged 4-6 months, parenting empowerment was related to the nutritional status of infants based on WAZ (p=0.022) and LAZ (p=0.028).

Risk factors for maternal care that reflect the empowerment of mothers in breastfeeding, maintaining nutritional and health conditions, and the child's environment, are essential for preserving child growth. It is necessary to know the magnitude of the influence of each parenting risk factor in influencing the nutritional state of the baby. These risk factors help increase the empowerment of mothers in optimal care in maintaining the nutritional state of their babies. Therefore, all the risk factors of maternal care are jointly determined for their influence on the nutritional state of children, so those risk factors can select the maternal care model in maintaining the nutritional state of children.

3.3. Mother Parenting Risk Factor Model in Maintaining Children's Nutritional Condition

3.3.1. Children 0-3 months

The parenting risk factor model based on the child's nutritional state with the WAZ is fit because the Goodness of Fit Index value is 0.883. In the model, there is multicollinearity between breastfeeding and the baby's birth weight, so we cannot calculate the effect of breastfeeding on the nutritional state of the baby.

Table 1 shows the strong relationship (t value) and the influence of parenting risk factors in maintaining the nutritional status of infants (path coefficient value γ). The baby's birth weight had a more significant impact (γ=0.71) than the mother's ability to care for a sick baby (γ=-0.68) on the nutritional state of the baby. If the baby's birth weight is good, the nutritional status is also good.

The mother's ability to care for a sick baby has an unfavorable influence on the child's nutritional state. The more helpless the mother is in caring for a sick baby, the better the nutritional state. The reason is as many as 80% of mothers immediately take their child for treatment if he is suffering so that the child recovers quickly and his nutritional state is maintained. Based on the model, many mothers still cannot properly care for sick children. This model also shows the magnitude of the effect of the incidence of sick children on their nutritional status (γ=0.28); the more often children get sick, the lower their nutritional level.

The parenting risk factor model based on the nutritional state of the child with the LAZ is fit, where the Chi-Square value is -0.00 with a Degrees of Freedom value of 0. The Chi-Square probability is one, which means that the relationship follows the theory that has been built. This model is determined by the child's birth weight, morbidity, and the mother's empowerment in breastfeeding the child. Still, there is multicollinearity between breastfeeding and the birth weight of the baby, so the effect of breastfeeding cannot be calculated on the nutritional state of the baby.

The birth weight of children has a slightly more significant effect (γ=0.37) on the nutritional status of children than the incidence of sick children (γ=0.36). The incidence of sick children was measured based on their occurrence when the study was conducted, and this illness was acute. The results of this study indicate that this illness occurs because of the undernutrition of children in the past.

Table 1. The t Value and Path Coefficient of Parenting Risk Factors in Maintaining Baby Nutrition Status Based on Age and Z Score.

Age (month)	Z score	Variable Influences: Parenting Risk Factors and Baby Nutrition Status	Path Coefficient Value	t Value
0-3	WAZ	Baby's Birth weight → Nutritional status	0.71	10.14
		Incidence of the sick baby → Nutritional status	-0.28	-4.43
		sick child care Nutritional status → Nutritional status	-0,68	-10.28
	LAZ	Birth weight → Nutritional status	0.37	2.23
		Incidence of the sick baby →Nutritional status	0.36	2.48
0-4	WAZ	Baby's Birth weight → Nutritional status	0.31	2.59
	WLZ	Baby's Birth weight → Nutritional status	0.36	3.32
		sick child care → Nutritional status	0.31	2.95

Based on the model of parenting risk factors on the nutritional state of infants 0-3 months, the birth weight of children, reducing the incidence of sick children and increasing the empowerment of mothers in caring for sick children improves infant nutritional status.

3.3.2. Children 4-6 months

The risk factor model for maternal care in maintaining the nutritional state of children based on the BB/U index is fit, where the Chi-Square value is 0.84 with a Degrees of Freedom value of three. The Chi-Square probability is 0.84, meaning the relationship has a match with the developed theory. A child's birth weight affects his nutritional status based on the WAZ (γ=0.31). The better the child's birth weight, the better the nutritional state.

Based on the WLZ, the parenting risk factor model is very following the theory built, where the Chi-Square value is 0.00 with a Degrees of Freedom value of three. The Chi-Square probability is 0.99, which means that the model has conformity which is excellent with the theory that has been built. In this model, the child's nutritional status is influenced by the child's birth weight (γ=0.36) and care when the child is sick (γ=0.31). Underweight children are determined by the child's birth weight and treatment when the child is sick.

Based on the LAZ, the parenting risk factor model is very in line with the theory built, where the Chi-Square value is 0.00 with a Degrees of Freedom value of 0. The Chi-Square probability is 1, which means that the relationship follows the theory which has been built. This parenting risk factor model shows the influence of a mother's empowerment in caring for sick children on the incidence of sick children (γ=-0.38). The more mothers are powerless to care for sick children, the lower the number. These results show the same picture in the model of maternal care factors in children aged 0-3 months of the powerlessness of mothers to care for sick children. The mother immediately takes the child for treatment if he is suffering so that the child recovers instantly or decreases the incidence of sick children. The powerlessness of mothers in caring for sick children and the incidence of sick children are not related to the child's nutritional state.

The risk factor model of maternal care in maintaining child nutrition for 4-6 months shows that the nutritional status of children is determined mainly by the child's birth weight and the mother's ability to care for sick children.

4. Discussion

Based on the factors causing the occurrence of nutritional problems by UNICEF 1989, the risk factors for maternal care in maintaining nutrition for children 0-6 months in this study consisted of the incidence of sick children, sick child care, child birth weight, breastfeeding, and feeding, caring for children's growth, as well as the mother's ability to care for the baby's environment. The risk factor model of maternal care in maintaining the nutrition of children 0-6 months is composed of the incidence of sick children, the mother's ability to care for children when sick, and birth weight.

The model cannot explain the effect of breastfeeding on the nutritional status of children because there is multicollinearity of exogenous variables. Approximately 90.7% of mothers breastfeed their babies, and only 37% directly breastfeed their babies (early initiation). Colostrum was given by 88.1% of mothers, and 89.5% of mothers had correctly understood the benefits of colostrum for babies. Meanwhile, 40.7% of mothers know that babies are only given breast milk for up to 6 months (exclusive breastfeeding).

As many as 53.5% of mothers gave formula milk before the mother's milk came out. Furthermore, only 63.8% of mothers continued breastfeeding, whereas most (60%) continued breastfeeding for only a few weeks, and 30.8% of mothers resumed breastfeeding within two months. The reason for those who discontinued breastfeeding was because the baby did not want to breastfeed his mother anymore (51.7%).

The description of breastfeeding for the baby shows that the mother has been unable to breastfeed properly (exclusively). This situation is quite worrying about an increase in the incidence of sick babies due to insufficient intake of the necessary nutrient [11], [12]. Breast milk contains all the nutrients and fluids needed to meet all infant nutrition in the first six months of life [10]. Giving fluids other than breast milk can also be a means of entry for pathogenic bacteria [10], [13]. Early childhood is very susceptible to bacteria that cause diarrhea, especially in an environment that is less hygienic and has poor sanitation [13], [14]. Exclusive breastfeeding from birth to 4 months can reduce infant and child morbidity by 10-20 times and mortality by 1-7 times [11], [12], [15], [16].

The incidence of a sick baby affects his nutritional state [17], [18]. Those who were ill at the age of 4-6 months were 3.8 times more than those aged 0-3 months, although there was no relationship between the incidence of illness and the age group of children. As many as 55.8% of infants with ARI and diarrhea, 64.6% of infants with fever, 57.1% with cough, and 20.8% of infants with cough and shortness of breath. The incidence of ARI and diarrhea in this study was higher than the figure in Indonesia.

No matter how mild, infections have adverse effects on nutritional status, and malnutrition can make a person more susceptible to disease, which causes a vicious cycle [10], [18]. Diseases decrease nutrient intakes and increase nutrient losses even when subclinical. The losses include decreased intestinal absorption, direct loss of nutrients in the gut, internal diversion for metabolic responses to infection, and increased BMR when fever is present. The clinical importance of these disease consequences depends on the individual's prior state, the nature and duration of the infection, and the individual's diet during the illness, particularly dietary intake during the convalescent period

and whether full recovery takes place before another infection occurs.

When the child is sick (cough, fever, and shortness of breath), 64.3% of mothers continue to give breast milk in the same amount as when they are not sick, and 28.6% of mothers do not give breast milk at all. As many as 75% of mothers think breastfeeding can help the baby's recovery. When the child is sick, 88.2% of mothers do not give dietary restrictions. Those who give food taboos when a child is sick aim to prevent the child from getting a more severe illness [19], [20]. When a child has diarrhea, as many as 30.8% of mothers give more breast milk than usual, and 46.2% provide breast milk in the same way as healthy children. Likewise, 40% of mothers gave more drinks than breast milk (non-formula milk) because mothers feared that the cause of diarrhea was the formula the mother gave. It is more for mothers who give babies both breast and non-breast milk because the baby is thirsty. This situation shows that mothers do not understand the role of breastfeeding for their sick babies.

Breast milk is the best food for babies. Breast milk contains antibodies that can help the baby recover [21], [22]. Breast milk contains 88% water, so the mother does not need to give anything other than breast milk when the child is sick. The high-water content in breast milk can help reduce a child's body temperature, which increases when sick [12]. Giving drinks other than breast milk can reduce breast milk intake, which is full of nutrients needed by the baby because the child already feels full, which can cause a worsening of the child's nutritional state [23]. Drinks other than breast milk can also be a source of disease if the drink contains pathogenic bacteria that can worsen the child's illness. Drinks other than breast milk do not have a balanced nutritional composition between carbohydrates, water, and sodium, so they can exacerbate the incidence of diarrhea [12], [15].

Diarrhea can cause a child to lose a lot of fluids, and if these fluids are not replaced quickly, the child can become dehydrated and may need to be hospitalized. So, if babies are breastfeeding, we should keep feeding on demand [24]. If babies are formula feeding, we don't need to dilute the formula, continue formula feeding. If babies are not taking other fluids well, offer an oral rehydration solution (ORS). The description of breastfeeding by mothers shows that mothers do not understand the role of breastfeeding for sick babies.

Many babies aged 4-6 months are sick. The description of giving food when a child has diarrhea is as follows. Most (42.9%) mothers did not feed their babies, and 28.6% of mothers provided their children less than usual, in addition to feeding the same as when the child was not sick. Mothers do not feed their children more when they have diarrhea because 50% of each mother is worried that the child's stomach is not strong and the child is fussy. 44.4% of children eat the same amount when they have diarrhea. This situation showed the mother's inability to feed a child with diarrhea.

Research indicates that breastfed babies do not need to start on solid food until they are about six months. This situation shows that mothers were encouraged to start babies on solid earlier. However, it can be damaging to a baby's health in the long term [12], [25]. Babies who are introduced to solid food are earlier than that are more likely to get diarrhea and chest infection [12], [16], [23]. Babies given complementary foods or formula milk will have a 17 times greater risk of experiencing diarrhea and are 3 to 4 times more likely to get ARI than babies who are breastfed [15]. The provision of complementary foods at the age of 3-4 months apart from preventing the fulfillment of exclusive breastfeeding, the quantity and quality of nutrition are still low [23], [26]. Also, if solid food is started early, the baby is likely to take breastmilk, yet breastmilk contains more energy and nutrients than vegetable or fruit purees. This situation will worsen the nutritional status of their children and inhibit their growth.

During the healing period of diarrhea, 60% of mothers gave breast milk, and 50% of mothers gave more drinks other than breast milk. All mothers stated that during this healing period, the child needed to drink more and get healthy quickly. The mother's knowledge was obtained from the doctor. Likewise, 50% of mothers feed their children more with feeding children, although 50% of mothers do not know the reason.

At the recovery stage, keep giving babies the ORS and breastmilk or formula feeding and give foods they usually eat until diarrhea is less frequent to prevent the occurrence of deviation from children's growth. Drinks and foods are provided in more significant quantities to replace the nutrients lost a lot when the child is sick and catch up on their growth.

When a child has a cough, 86.7% of mothers seek help from health workers, while other mothers give their own cough medicine. As many as 76.9% of mothers immediately seek help on the same day, and 7.7% of mothers seek help for the longest two days after the child is sick. Most (53.3%) babies received their first treatment at the Community Health Centre (CHC) based on their mother's decision. The subsequent most seeking treatment (34.8%) remained at the CHC, and the second-highest (26.1%) went to a specialist.

When children have diarrhea, most (46.2%) mothers do not give anything to their babies, and only 15.4% of mothers give ORS. Other mothers give medicine and herbs. The purpose of giving ORS is that the child does not lack fluids and administers drugs or herbs so that the child recovers. CHC, midwives, and general practitioners obtained knowledge of giving ORS. The reason for mothers who do not offer anything when their children have diarrhea is because they are not old enough to take medicine.

The mother's treatment of diarrhea for children is as follows. As many as 69.2% of mothers seek advice and medicine for babies with diarrhea. Most (27.3%) mothers seek treatment at the CHC, and the other mothers go to

general practitioners and midwives. The decision-maker in seeking treatment is the mother herself (72.7%). Babies not brought to the treatment center will be given medicine by their mother (53.8%), and only 22.2% of mothers will provide ORS. ORS administration is known to be 58.3% of mothers from doctors. Follow-up treatment of diarrhea is the most (33.3%) mothers bring to the doctor. When the child coughs and is short of breath, the mother immediately takes her child for treatment from primary to advanced levels at health services.

On the other hand, when a child has diarrhea, the mother does not immediately take him for treatment at the health service but treats it himself even by giving herbal medicine. Diarrhea can be dangerous if not treated because it drains water and salts from a child's body. Giving ORS (oral rehydration solution) can be used to keep children well hydrated when their diarrhea is severe and replace lost fluids.

This situation illustrates the mother's powerlessness in dealing with her sick baby because she immediately seeks help. The incidence of cough, cold, and fever in infants is not always caused by pathogenic bacterial infection. Still, it can also be caused by a virus that can be healed by improving infant food intake for those who have been given complimentary foods or by increasing breastfeeding. Likewise, diarrhea is mainly caused by viruses. This condition can be done by the mother herself to cope with a sick baby. When children have diarrhea, the mother does not give anything when they have diarrhea. This situation will worsen sick children's condition and their nutritional state. ORS can prevent children from falling into a dehydrated state, and children can recover from illness quickly with adequate intake, but not by giving drugs and herbs that can worsen the child's health condition.

Culture plays a role in the care of sick children [27]. As many as 36.5% of mothers forbid their children to eat certain foods, so they don't get sick. The prohibitions on these foods are as follows. As many as 25% of mothers forbid their children to drink ice, fried foods, spicy sausages, and snacks so they don't get hot and cold coughs and sore throats. As many as 30% of mothers forbid food and drinks such as coarse porridge and formula milk, and mothers must not eat spicy food, so their children do not have diarrhea. As many as 33% of mothers forbid eating and drinking chocolate, ice, fried foods, oranges, and formula milk, so their children do not get sick with coughs and fever. Only 2.3% of mothers do not give iced drinks, so they are not suffocating. The reason for the prohibition on eating and drinking is because the food is the cause of diarrhea or to get well soon from diarrhea, and indeed the food is not suitable for the child's age. This situation will further worsen the nutritional state of children and, in the end, can inhibit their growth.

Given the importance of treating sick children through breastfeeding and food on the nutritional status of children, it turns out that there are still different opinions. That feeding after birth is not related to the baby's weight or length but birth weight [28].

Low birth weight is a significant risk factor for nutritional state at the end of the first year of life [28]–[30]. The results of this study support this opinion, not even at the end of the baby's first year of life but early in life. Table 1 shows that birth weight is essential to babies' growth patterns in the first six months, even the first three months of life.

Birth weight indicates the quality of maternal health care and nutrition during pregnancy and the mother's nutritional status before pregnancy [31], [32]. Therefore, improving maternal nutrition before pregnancy, adequate nutritional intake, and maternal health during pregnancy is an appropriate and early effort to prevent low birth weight.

In 2012, a study was conducted at the exact location as this study was conducted, showing the onset of growth deviation occurring at three months of age[6]. The picture of this growth deviation is similar to that in several other developing countries. It shows that the pursuit of growth of children based on their birth weight lasts until the child is three months old. These results are supported by several other studies [25], [33]. Likewise, the results of this study have proven that short children are formed at the age of 4-6 months, and the child's birth weight influences this situation.

If babies born with low birth weight survive, they will experience growth deviation in the next life with unfavorable consequences [10], [25], [34]. Suppose this impact is exacerbated by the low ability of mothers to care for sick children and the incidence of illness that affects the nutritional status of children aged 0-3 months. In that case, formula feeding after four months of age is thought to be able to correct these growth irregularities and reduce adverse consequences in the next life [35].

5. Conclusion

The risk factor model of maternal care in maintaining the nutritional state of children 0-6 months is composed of the incidence of sick children, the mother's ability to care when the child is sick, and the child's birth weight.

These findings can be used as material for the development of health and nutrition science in tackling existing nutritional problems through increasing maternal empowerment and it needs to be proven. This takes a long time, so it is necessary to "remodel" the nutrition education curriculum in all educational institutions.

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Conflict of Interest

Authors have no conflict of interest to any parties regarding the research and publication.

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