Poverty Dominant Factor Problems in Infant and Young Child Feeding Practices in East Nusa Tenggara, Indonesia

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Abstract:
Nutritional problems in children under five in East Nusa Tenggara (NTT) both in urban and rural areas occupy the highest rank, it was estimated due to problematic eating patterns.
Objective. To identify the risk factors for the failure of Infant and Young Child Feeding (IYCF) practice in urban and rural NTT.
The study used a cross sectional design of Indonesian Demographic and Health Survey (IDHS) data in 2017. The samples were women of childbearing aged 15-49 years who had children aged 6-24 months, in total 286 children. The bivariate analysis used the chi square test to describe the differences in the proportions of family, mother and child characteristics in urban and rural areas, and to describe the differences in the proportions of IYCF practices based on the characteristics of families, mothers and children in urban and rural areas. Bivariate analysis is also the stage of selection of candidate variables for multivariate analysis (p≤0.25). Multivariate analysis using multivariate binary logistic regression test.
The study found that 37.3% in urban areas and 57.1% in rural areas did not meet the recommendations. 23.9% of children in urban areas and 35.6% of children in rural areas do not eat according to the recommendations. The practice of IYCF not according to recommendations in rural areas (65.8%) is higher than urban areas (55.2%). Factors related to the practice of IYCF in NTT are socioeconomic and maternal age. Families with the poorest socioeconomic are at risk of more than 5 times the FDI practice not according to the recommendations (OR95%CI: 5,667:1,059-30,308). Mother's age is also associated with IYCF practice, mothers aged less than 20 years have a 3.5 times risk of IYCF practice compared to mothers aged 20-35 years (OR 95% CI: 3,558:1,164-10,869).
Education is needed in antenatal care activities and classes for pregnant women to prepare prospective mothers to ensure optimal child development.

Keywords: Children under two years old, urban, rural, Infant and Young Child Feeding (IYCF)

1. Introduction

Nutritional problems among the children under two years old and under five years old (toddler) in East Nusa Tenggara (NTT) showed the highest prevalence. 35.9% of under-fives children and 42.6% of under-two children in NTT were stunted (short and very short), 26% of under-fives children and 30.7% of under-two children experienced severe malnutrition and malnutrition.[1] The high prevalence of nutritional problems in under-fives children and under-two children is related to nutritional intake as a direct cause of nutritional problems. Infants and children need proper food intake to achieve optimal growth and development, especially in the first 1000 days of life. Without a variety of food intakes and an adequate frequency of eating, nutritional needs will not be met and can result in infants and children experiencing malnutrition, poor nutrition, stunting, wasting, un-optimal brain intelligence, decreased body resistance, and

stunted growth and development problems, even death. More than 50% of deaths of children under five are related to malnutrition.[2,3] Efforts to overcome the problem of malnutrition in infants and toddlers through the provision of good and correct infant and child food.[4] The strategy to expand the scope of feeding for infants and children according to standards is through the practice of Infant and Young Children Feeding (IYCF) in accordance with the recommended frequency and variety of foods.

Incorrect feeding was reported as the cause of two thirds of toddlers experiencing growth problems and even death, as a result of children not getting Early initiation of breastfeeding (EIBF), exclusive breastfeeding, children getting solid food too early and or too late, then the composition of nutrients is incomplete, unbalanced and unhygienic.[3,5,6,7,8] The practice of IYCF which includes food salt and frequency of eating in children 6-23 months still shows serious problems. National figures showed that only 60% of children eat a variety of foods according to the recommendations, and only 71.7% of children receive the minimum frequency of eating according to the recommendations. Data in NTT Province showed that only 39.9% of children with a variety of foods according to the recommendations, and only 71.4% of children with the minimum frequency of eating according to the recommendations.[9]

The failure of IYCF practice was influenced by various factors, including factors from the mother, such as education, knowledge, occupation, age at first marriage.[10,11,12,13] The practice of feeding infants under two was strongly influenced by the culture of the community/area of residence.[14] The area of residence was related to IYCF.[4] Girls living in urban areas eat a more diverse diet than boys (62% versus 59%) and girls living in rural areas eat a more diverse diet than boys (66% versus 55%); the percentage of children receiving the recommended minimum frequency of eating is higher in urban areas (76%) than in rural areas (68%).[15] The percentage of children who receive IYCF practices according to the recommendations is higher in urban areas (46%) than in rural areas (35%). However, another study found that socio-economic conditions did not affect complementary feeding for infants.[16]

There are still limited research results that explain the frequency and diversity of infant and child food in urban and rural areas in NTT and the factors that influence it. Meanwhile, the results of national surveys on a regular basis showed that various problems of under-five nutritional disorders in NTT occupy the highest rank. Further analysis is needed to find out the practice of IYCF based on the area of residence in NTT Province and identify the factors that influence it, so that the results obtained can be the basis for making appropriate intervention policies according to regional conditions.

2. Methods

The study design used a cross sectional design approach by utilizing the results of the Indonesian Demographic and Health Survey (IDHS) in 2017. The population were women of childbearing aged 15-49 years old who had children aged 6-24 months. The *sampling* used in the 2017 IDHS was a stratified two-stage sampling. The sampling unit in this study was women of childbearing aged 15-54 years who had children aged 6-24 months. The sample of married men selected from 8 households systematically from the 25 households.[9] The unit of analysis in this study was 286 children aged 6-24 months. The dependent variable was the practice of Infant and Young Child Feeding (IPM) in urban and rural areas. The independent variables were family characteristics (socio-economic status, number of household members, and number of children under five in the family), maternal characteristics (mother's education, mother's occupation, quality of antenatal care (ANC), quantity of ANC, antenatal care personnel, place of delivery, age at first marriage , marital status, parity, maternal age at delivery, planning of pregnancy, and place of prenatal care) and child characteristics (gender, child's birth weight, birth spacing, and postpartum examination). The research variables were identified from the 2017 IDHS women's questionnaire. Bivariate analysis used the *chi square* to describe the differences in the proportions of family, mother and child characteristics in urban and rural areas, and to describe the differences in the proportions of IYCF practices based on the characteristics of families, mothers and children in urban and rural areas. Bivariate analysis was also the stage of selection of candidate variables for multivariate analysis (p≤0.25). The multivariate analysis used multivariate logistic binary regression to determine the relationship of more than one independent variable with the dependent variable simultaneously and to see which variables were most dominantly related to the practice of IYCF. The consideration of the 2017 Indonesian Health Demographic Survey (IDHS) has a research ethic review by the IYCF Institutional Review Board *(International Classification of Functioning)* with IYCF Project No. 132989.0.00. Further analysis of the IDHS data obtained ethical approval from the Health Research Ethics Commission of the Health Polytechnic MOH of Bengkulu. *Ethical Clearance* number KEPK.M/151/09/2021.

3. Results

Table 1 shows a description of the characteristics of families and children based on homogeneous residential areas between urban and rural areas except for perinatal examination. Based on the socioeconomic status of the family both in urban and rural areas, most of the families were middle to lower class. Socio-economic status in urban (68.7%) and rural (79.5%) were mostly in the poorest category, and there was no difference between rural and urban socio-economic status (p=0.289). Based on the number of household members, both in urban (70.1%) and rural (58.4%) there were more large families with more than 5 family members. The results of the analysis show that there was no difference in the proportion of the number of family members between urban and rural areas. (p=0.085).

Characteristics of Families	Urban	Rural	Total	p-value
Socio-Economic Status				
Richest	4,5	1,8	2,4	0,289
Richer	7,5	3,2	4,2	
Middle	4,5	3,2	3,5	
Poor	14,9	12,3	12,9	
Poorest	68,7	79,5	76,9	
Number of Family Members				
Small Family	29,9	41,6	38,8	0,085
Large Family	70,1	58,4	61,2	
Number of Toddlers in Family				
1 toddler	49,3	53,4	52,4	0,55
>1 toddler	50,7	46,6	47,6	
Gender				
Boy	49,3	51,6	51,0	0,737
Girl	50,7	48,4	49,0	
History of LBW				
Normal Birth Weight	80,6	81,7	81,5	0,834
Low Birth Weight	19,4	18,3	18,5	
Distance Between Births				
First Child	29,9	35,2	33,9	0,521
< 2 years	14,9	10,5	11,5	
≥ 2 years	55,2	54,3	54,5	
Perinatal Examination				
Health Workers	64,2	79,5	75,9	0,011
Non - Health Workers	35,8	20,5	24,1	

Table 1: Frequency Distribution of Family and Child Characteristics by Place of Residence

The results in Table 1 also shows the number of children under five in the household, the proportion in urban and rural areas were almost the same, so there was no difference in the proportion of the number of children under five in the family between urban and rural areas (p=0.55), as well as based on the sex of the child there was no difference in the proportion of male and female calamine sex between urban and rural areas (p=0.737). Characteristics of children based on a history of normal birth weight showed that both in urban and rural areas were higher in children born with normal birth weight (NBW), there was no difference in the prevalence of LBW in urban and rural areas (p=0.834). The proportion of the distance between births more than 2 years in urban areas (55.2%) and in rural areas (54.3%) was almost the same, there was no difference in the distance between births in urban and rural areas (p=0.521). Perinatal check-ups for health workers in urban areas (64.2%) were lower than in rural areas (79.2%), and there was a difference in the proportion of perinatal check-ups in urban and rural areas (p=0.011).

Mother's Characteristics	Urban	Rural	Total	p-value
Mother's Education				
High	28,4	13,7	17,1	0,006
Middle	49,3	47,9	48,3	
Basic	22,4	38,4	34,6	
Mother's Occupation				
Working	50,7	49,8	50,0	0,889
Unemployed	49,3	50,2	50,0	
Mother's Age				
<20 years old	1,5	5,9	4,9	0,055
20-25 years old	76,1	81,7	80,4	
>35 years old	22,4	12,4	14,7	
Marital Status				
Partner	97,0	93,2	94,1	0,242
No Partner	3,0	6,8	5,9	
Parity				
Primipara	29,9	34,7	33,6	0,705
Multipara	58,2	52,5	53,8	
Grandemultipara	11,9	12,8	12,6	
Age at First Marriage				
≥21 years old	6,0	5,0	5,2	0,761
<21 years old	94,0	95,0	94,8	
Planning Pregnancy				
Desired pregnancy	91,0	98,6	96,9	0,002
Unwanted pregnancy	9,0	1,4	3,1	

Mother's Characteristics	Urban	Rural	Total	p-value
Place of ANC				
Health Facilities	85,1	77,6	79,4	0,187
Non Health Facilities	14,9	22,4	20,6	
Quantity of ANC				
Good	71,6	63,9	65,7	0,244
Not Good	28,4	36,1	34,3	
Quality of ANC				
Good	28,4	24,2	25,2	0,493
Not Good	71,6	75,8	74,8	
Place of Delivery				
Health Facilities	91,0	69,9	74,8	0,000
Non Health Facilities	9,0	30,1	25,2	

Table 2: Frequency Distribution of Mother's Characteristics by Place of Residence

Table 2 shows the characteristics of mothers based on homogeneous residential areas, except for the characteristics of mother's education, pregnancy planning and place of delivery. Based on the level of education in urban (49.3%) and rural (47.9%) the level of secondary education is higher. The results of the analysis showed that there were differences in the proportion of maternal education levels in urban and rural areas (p=0.006). The proportion of working mothers in urban (50.7%) and rural areas (49.8%) was almost the same, there was no difference in the proportion of maternal characteristics based on maternal occupation in urban and rural areas (p=0.889). The highest maternal age group, both in urban (76.1%) and rural (81.7%) were mostly aged 20-35 years, and there was no difference in maternal age between urban and rural areas (p=0.055). Most of the proportion of marital status in urban (97%) and rural (93.2%) has a partner. There was no difference in marital status in urban and rural areas (p=0.242). The proportion of parity in urban (58.2%) and rural (52.5%) were almost the same, there was no difference in parity in urban and rural areas (p=0.705). Almost all proportions of age at marriage in urban (94.1%) and rural (95%) were less than 21 years old, there was no difference in the proportion of age at first marriage between urban and rural areas (p=0.761). Almost all the proportions of planning pregnancy in urban (91%) and rural (98.6%) were desired pregnancies, there was a difference in the proportion of planning pregnancies in urban and rural areas (p=0.002). Most of the proportion of antenatal care (ANC) in urban (85.1%) and rural (77.6%) in health facilities, there was no difference in ANC places between urban and rural areas (p=0.187). The proportion of ANC quantity in both urban (79%) and rural (66.4%) was mostly in good category, there was no difference in ANC quantity between urban and rural areas (p=0.244). The proportion of ANC quality (7T) mostly in urban (71.6%) and rural (75.8%) categories was not good, there was no difference in ANC quality (7T) between urban and rural areas (p=0.493). Almost all of the places of delivery for mothers in urban areas were in health facilities (91.0%), while in rural areas 69.9% go to health facilities, there was a difference in places of delivery between urban and rural areas (p=0.000).

IYCF Practices	Urban	Rural	Total	p-value
Food Diversity				
According to recommendation	62,7	42,9	47,6	0,005
Not According to recommendation	37,3	57,1	52,4	
Frequency of Eating				
According to recommendation	76,1	64,4	67,1	0,074
Not According to recommendation	23,9	35,6	32,9	
Infant and Young Child Feeding (IYCF)				
According to recommendation	44,8	34,2	36,7	0,118
Not According to recommendation	55,2	65,8	63,3	

Table 3: Frequency Distribution of Infant and Young Child Feeding (IYCF)
Practice Based on Place of Residence

Table 3 shows that most of the children's diet in urban areas (62.7%) is in accordance with the recommendations, but in rural areas (57.1%) most of them were not according to the recommendations. There was a difference in the proportion of food diversity for infants and children in urban and rural areas (p=0.005). Based on the frequency of children's eating, it shows that 23.9% in urban areas and 35.6% in rural areas did not eat according to recommendations. The frequency of eating for children was almost the same in urban (76.1%) and rural (64.4%), mostly according to recommendations, there was no difference in the proportion of eating frequency for infants and children in urban and rural areas (p=0.074). The proportion of IYCF practice in urban areas (55.2%) and in rural areas (65.8%) was mostly not according to the recommendations, there was no difference in the proportion of FDI practice in urban and rural areas (p=0.118).

Table 4 shows that in urban areas there were differences in the proportion of FDI based on socio-economic characteristics (p=0.0003), while other characteristics were homogeneous. In rural areas, there were differences in the proportion of IYCF based on the characteristics of the number of children under five in the household (p=0.011), while other characteristics were homogeneous. Based on table 4 the practice of IYCF based on the characteristics of families, mothers and children both in urban and rural areas was almost the same.

Characteristic of Families	Urban (%)		P	Rural (%)		P	NTT (%)		P
	AR	NAR		AR	NAR		AR	NAR	
Socio-Economic Status									0,061*
Richest	10,0	0		2,7	1,4		4,8	1,1	
Richer	16,7	0	0,003	2,7	3,5	0,725	6,7	2,8	
Middle	10,0	0		2,7	3,5		4,8	2,8	
Poor	13,3	16,2		16	10,4		15,2	11,6	
Poorest	50,0	83,8		76	81,3		68,6	81,8	
Number of Family Members									
Small Family	40,0	21,6	0,102	36,0	44,4	0,229	37,1	39,8	0,659
Large Family	60,0	78,4		64,0	55,6		62,9	60,2	
Number of Toddlers in Family									
1 toddler	46,7	51,4	0,703	65,3	47,2	0,011	60,0	48,1	0,051*
>1 toddler	53,3	48,6		34,7	52,8		40,0	51,9	
Gender									
Boy	50,0	48,6	0,912	58,7	47,9	0,131	56,2	48,1	0,185*
Girl	50,0	51,4		41,3	52,1		43,8	51,9	
History of LBW									
Normal Birth Weight	86,7	75,7	0,258	81,3	81,9	0,912	82,9	80,7	0,645
Low Birth Weight	13,3	24,3		18,7	18,1		17,1	19,3	
Distance Between Births									
First Child	26,7	32,4	0,561	37,3	34,0	0,198	34,3	33,7	0,714
< 2 years	20,0	10,8		5,3	13,2		9,5	12,7	
≥ 2 years	53,3	56,8		57,3	52,8		56,2	53,6	
Perinatal Examination									
Health Workers	63,3	64,9	0,897	74,7	81,9	0,206	71,4	78,5	0,181*
Non - Health Workers	36,7	35,1		25,3	18,1		28,6	21,5	
Mother's Education									
High	36,7	21,6	0,397	18,7	11,1	0,287	23,8	13,3	0,069*
Middle	43,3	54,1		46,7	48,6		45,7	49,7	
Basic	20	24,3		34,7	40,3		30,5	37,0	
Mother's Occupation									
Working	60	43,2	0,172	53,3	47,9	0,447	55,2	47,0	0,177*
Unemployed	40	56,8		46,7	52,1		44,8	53,0	
Mother's Age									
<20 years old	3,3	0	0,519	9,3	4,2	0,204	75,2	83,4	0,153*
20-25 years old	73,3	78,4		76	84,7		7,6	3,3	
>35 years old	23,3	21,6		14,7	11,1		17,1	13,3	
Marital Status									
Partner	96,7	97,3	0,880	89,3	95,1	0,107	91,4	95,6	0,152*
No Partner	3,3	2,7		10,7	4,9		8,6	4,4	
Parity									
Primipara	26,7	32,4	0,860	37,3	33,3	0,837	34,3	33,1	0,981
Multipara	60	56,8		50,7	53,5		53,3	54,1	
Grande-multipara	13,3	10,8		12	13,2		12,4	12,7	
Age at first marriage									
≥21 years old	90	97,3	0,210	92	96,5	0,145	8,6	3,3	0,055*
<21 years old	10	2,7		8	3,5		91,4	98,7	
Planning Pregnancy									
Desired pregnancy	96,7	86,5	0,147	100	97,9	0,208	99,0	95,6	0,185*
Unwanted pregnancy	3,3	13,5		0	2,1		1,0	4,4	
Quantity of ANC									
Good	66,7	75,7	0,416	70,7	60,4	0,134	69,5	63,5	0,304
Not Good	33,3	24,3		29,3	39,6		30,5	36,5	
Place of ANC									
Health Facilities	86,7	83,8	0,742	82,7	75	0,196	83,8	76,8	0,158*
Non Health Facilities	13,3	16,2		17,3	25		16,2	23,2	
Quality of ANC									
Good	30	27	0,788	30,7	20,8	0,107	30,5	22,1	0,116*
Not Good	70	73		69,3	79,2		69,5	77,9	
Place of Delivery									
Health Facilities	93,3	89,2	0,555	76	66,7	0,153	81,0	71,3	0,069*
Non Health Facilities	6,7	10,8		24	33,3		19,0	28,7	

Table 4: Infant and Young Child Feeding (IYCF) Practices based on Family, Mother and Child
* Multivariat candidate (p<0, 25)   AR=According to Recommendation NAR= According to Recommendation

The results in Table 5 find factors socio-economic as the dominant factor associated with the practice of IYCF, the lower the socioeconomic, higher the risk of IYCF practice not in accordance with the recommendations. Families with the poorest socioeconomic were at risk of more than 5 times the FDI practice not according to the recommendations

(OR95%CI: 5,667:1,059-30,308). Mother's age was also associated with the practice of IYCF, mothers aged less than 20 years had a 3.5 times risk of IYCF practice compared to mothers aged 20-35 years (OR 95% CI: 3,558:1,164-10,869).

Characteristic	B	P	OR (95% CI)
Socio-Economic Status			
Richest			
Richer	0,457	0,657	1,579 (0,211-11,840)
Middle	0,961	0,363	2,614 (0,330-20,711)
Poor	1,209	0,182	3,348 (0,567-19,786)
Poorest	1,735	0,043	5,667 (1,059-30,308)
Mother's Age			
<20 years old	1,268	0,026	3,558(1,164-10,869)
20-25 years old	-0,413	0,239	0,662(0,333-1,315)
>35 years old			
Quality of ANC			
Good			
Not Good	0,535	0,063	1,707 (0,972-2,999)

Table 5: Risk Factors for Child Feeding Practices in NTT Province

4. Discussion

The results of the study found that 37.7% of under-two children in urban areas and 57.1% in rural areas did not meet the recommendations, and 23.9% in urban areas and 35.6% in rural areas did not eat as recommended. The composite of food diversity and eating frequency found that 55.2% of under-fives children in urban areas and 65.8% in rural areas did not comply with the recommendations. This figure was higher than the national figure, where the percentage of children who receive IYCF practices according to the recommendations in urban areas is 46% and in rural areas 35% (BPS, 2017).[9]

Socio-economic factors are significantly related to the practice of IYCF among children under two in NTT. The poorest socio-economic as the dominant factor for IYCF is not in accordance with the recommendations. The lower the socioeconomic level, the higher the risk of IYCF practice not in accordance with the recommendations. The poorest socio-economic risk is 5.6 times that IYCF practices were not in accordance with the recommendations. The National Figures also find that the percentage of FDI practices as recommended increases as the wealth quintile increases from 28% in the lowest wealth quintile to 57% in the top wealth quintile.[9] This finding is in line with the results of research in the work area of the Bayan Health Center, Bayan District, Purworejo Regency which proved that there is a socio-economic relationship with IYCF (p = 0.001). The low socioeconomic status causes the family's lack of ability to buy diverse foodstuffs, with the lower the socioeconomic status, the lower the consumption of various foods according to recommendations compared to families with high socioeconomic status. Socio-economic proportions of families in urban and rural areas of NTT province were homogeneous, so the problem of IYCF practice not according to recommendations in urban and rural NTT is also homogeneous. Low socioeconomic status is the basic cause of various nutritional and health problems.[5,6,7] Research by Swandari et al (2017) proved that there was a relationship between economic conditions and feeding on the nutritional status of children. Rich families were more likely to practice IYCF according to the recommendations. Good financial condition will increase the family's purchasing power for additional food to be bigger and easier. The family's ability to meet food needs, both in quantity and nutritional quality, greatly influences nutritional status. A high level of family income was closely related to the availability and sufficient food to fulfill family nutrition. Families who have high incomes will be able to meet all the needs of their families.[17]

Maternal age is also related to IYCF practice. Mothers aged less than 20 years are at risk of 3.5 times the practice of IYCF not according to recommendations. The age of the mother affected how a mother feeds her child according to the variety of food and the frequency of eating will affect the growth and development of a child. Young mother will be more at risk because at that age a mother does not know much information about feeding children that is good and according to recommendations, young mothers also need readiness and have not experienced being a mother in providing parenting to children. If a mother already has experience and information on how to practice IYCF according to the recommendations, it will reduce the risk of children experiencing various nutritional and health problems. Mothers at a young age due to lack of knowledge about their duties and role as mothers affect the ability of family parenting patterns.[19] Young mothers are psychologically not ready to become mothers, so they become a psychological burden that can cause depression and make it difficult for breast milk to come out. Health education efforts on IYCF are needed, nutritional counseling for mothers to improve the nutritional status of toddlers.[20,21,22]

The quality *Antenatal Care* (ANC) is also a determining factor for the success of IYCF Practices.[23] The results of this study found that the quality of ANC that is not good has a risk of 1.7 times. The practice of IYCF is not according to the recommendations compared to the quantity of good ANC. During prenatal care, pregnant women are educated about general dietary and lifestyle choices that will improve the health of themselves and their fetuses. Another benefit is that through ANC, early detection of possible complications that occur during delivery can be carried out, so that early action can be taken to prevent the possibility of maternal and/or fetal death during delivery. *ANC* is a comprehensive and quality service provided to all pregnant women. Regular prenatal care aims to provide the best possible physical and mental conditions for pregnant women and save mothers and babies from pregnancy until birth, preparation for early initiation of breastfeeding (IMD), newborn care, exclusive breastfeeding so that they can run in a healthy and normal way.[25]

A quality ANC allows pregnant women to get information about prenatal care, prevention of congenital abnormalities, delivery and early initiation of breastfeeding (IMD), postpartum, newborn care, exclusive breastfeeding, family planning and immunizations for babies from health workers. Nutrition counseling relates to child feeding practices.[9] Counseling during ANC visits can improve knowledge and attitudes of mothers in the practice of IYCF. Mother's knowledge about IYCF will be related to mother's attitudes and actions and will indirectly improve the nutritional status of children.[20,26,27] Providing counseling on signs and dangers of pregnancy to pregnant women will change the knowledge of pregnant women into a good category and with good knowledge will change the attitude of pregnant women to be positive in recognizing and detecting early pregnancy danger signs.[28] Research in East and Central India found that mothers who frequently visited ANC were more likely to introduce complementary feeding to their babies compared to mothers who did not visit ANC.[29]

5. Conclusion

The characteristics of families, mothers and children are homogeneous between urban and rural areas in NTT Province, except for the characteristics of perinatal examination, mother's education, pregnancy planning and place of delivery. Practice of IYCF is also homogeneous between urban and rural areas. Factors related to the practice of feeding children in NTT are family socioeconomic, maternal age and ANC quality. Socio-economic factors are the most dominant factors related to the practice of IYCF. The findings of this study indicate the importance of nutrition education starting from pregnancy through antenatal care (ANC), classes for pregnant women, routine activities at integrated service posts, and activities for empowering mothers and families, especially for young mothers and low socioeconomic families. in order to increase knowledge of the importance of IYCF according to the recommendations, also increase the knowledge of mothers in using the yard to be a source of food for babies and children.

6. References

i. Ministry of Health RI. Basic Health Research National Report 2018. Agency for Health Research and Development. 2018.

ii. WHO, UNICEF, USAID et all. Indicators for Assessing Infant and Young Child Feeding Practices [Internet]. Vol. WHA55 A55, World Health Organization. 2010.

iii. World Health Organization. Complementary Feeding [Internet]. 2017. Available from: Who.Inf/nutrition topic/Complementary Feeding.

iv. Rivani. Infant and Young Child Feeding Training (IPM) [Internet]. 2013. Available from: http://gizi.depkes.go.id/training-berian-makan-bayi-dan-anak-pmba.

v. Selen DW. Evaluation of infant and young child feeding: Implications for contemporary public health. Annu Rev Nutr. 2007; 27:123–48.

vi. Lassi ZS, Rind F, Irfan O, Hadi R, Das JK. Impact of Infant and Young Child Feeding (IYCF) Nutrition Interventions on Breastfeeding Practices, Growth and Mortality in Low- and Middle-Income Countries: Systematic Review. Nutrients. 2020; 12(722):1–21.

vii. Marriott BP, White A, Hadden L, Davies JC, Wallingford JC. World Health Organization (WHO) infant and young child feeding indicators: Associations with growth measures in 14 low-income countries. Matern Child Nutr. 2012; 8(3):354–70.

viii. Furqan M, Faridi A, Alibbirwin, Susanti EN. The Relationship between Infant and Young Child Feeding (IYCF) Patterns, Knowledge of Nutrition, Food Intake and Status of Infectious Diseases with Nutritional Status of Toddlers in Pagelaran Village, Kab. Pandeglang. 2019.

ix. BKKBN, BPS, RI K. Indonesia Demographic and Health Survey 2017. Indonesia Demographic and Health Survey 2017. 2018.

x. Nurbaiti L. Qualitative Case Study of the Implementation of the Infant and Young Child Feeding Program in Five Community Health Centers in Central Lombok. J Doctor Unram. 2017;6(4):1–6.

xi. Sulistyaningsih R. Evaluation of the Local Breast Milk Complementary Feeding Program (MP-ASI) on Improving the Nutritional Status of Toddlers in Saigon and Parit Mayor Villages, East Pontianak District, 2012. J ProNers [Internet]. 2012; 1(1):1–7. Available from: https://jurnal.untan.ac.id/index.php/jmkeperawatanFK/article/view/3048

xii. Tanuwijaya RR, Permata W, Tunggal S, Manggabarani S. Knowledge Relationship between Infant and Young Child Feeding (IYCF) mothers on the Nutritional Status of Toddlers. J World of Nutrition. 2020;3(2):74–9. 13.

xiii. Wulandari FC, Wati DAK. Factors of Feeding Infants and Children Age 6-24 Months in the Work Area of the Bayan Health Center, Bayan District, Purworejo Regency. J Community Health (Issue 21). 2020;11(2):1–10.

xiv. IDAI. Recommendations for evidence-based feeding practices in infants and toddlers in Indonesia to prevent malnutrition. Work unit. Jakarta; 2015.

xv. Karnila A, Bantas K. Relationship of Residential Area with Exclusive Breastfeeding for Children 0-5 Months in Indonesia (Indonesian Health Demographic Survey Data Analysis) 2017. J Indonesian Health Epidemiol. 2020;3(2):49–54.

xvi. Juliyandari A, Suyatno, Mawarni A. The Relationship between Mother's Characteristics and Behavior in Early Complementary Feeding with Infant Growth Age 0-5 Months. J Masy Health. 2018;6(4):247–54.

xvii. Widaryanti R, Rahmuniyati ME. Evaluation of post-training on Infant and Young Child Feeding (IYCF) in posyandu cadres on improving the nutritional status of infants and toddlers. J Formil (Scientific Forum) Respati Public Health. 2019;4(2):163–79.

xviii. Dhami MV, Ogbo FA, Diallo TMO, Olusanya BO, Goson PC, Agho KE. Infant and young child feeding practices among adolescent mothers and associated factors in India. Nutrients. 2021;13(7): 1–28.

xix. Loppies IJ, Nurrokhmah Luluk E. The Impact of Early Marriage on the Development of Family Parenting Patterns in Inggiri Village, Biak District, Biak Numfor Regency. Echo Campus IISIP YAPIS Biak. 2020;15(2):107–13.

xx. Kumala D, Sianipar SS. The Effect of Infant and Young Child Feeding (IYCF) according to stages in Toddlers aged 0 – 24 Months in an Effort to Reduce Stunting Risk in the First 1000 Days of Life at the Posyandu, Keja Community Health Center, Kereng Bangkirai, Palangka Raya City, Central Kalimantan. Din Kesehatan J Midwifery and Nursing. 2019;10(2):571–84.

xxi. Rahmawati SM, Madanijah S, Anwar F, Kolopaking R. Counseling by Posyandu Cadres Improves Maternal Practices in Feeding Infants and Children aged 6-24 Months in Pagelaran Village, Ciomas District, Bogor, Indonesia. Indonesian Nutrition. 2019;42(1):11–22.

xxii. Liestyawati L. The Effect of Counseling Using Booklet Media on the Knowledge and Attitudes of Under-two children Mothers about Infant and Young Child Feeding (IYCF) in Kumusu Village, Kumusu District, Boyolali Regency. 2018; 1–19. Available from: http://eprints.ums.ac.id/68998/17/NASPUB-22.pdf

xxiii. 23. Dhami MV, Ogbo FA, Akombi-inyang BJ, Torome R, Agho KE. Understanding the enablers and barriers to appropriate infants and young child feeding practices in India: A systematic review. Nutrients. 2021; 13(3):1–36.

xxiv. Kuuire VZ, Kangmennaang J, Atuoye KN, Antabe R, Boamah SA, Vercillo S, et al. Timing and utilisation of antenatal care service in Nigeria and Malawi. Glob Public Health. 2017;12(6):711–27.

xxv. Lumempouw VJ. Hubungan Faktor Sosial Ekonomi Ibu Hamil dengan Wanea Kota Manado. e-journal Keperawatan (e-Kp). 2016; 4(2):1–7.

xxvi. Sari F, Ernawati E. Relationship of Mother's Knowledge About Infant and Young Child Feeding (IPM) with Nutritional Status of Infants Under Two Years Old (Under-two children). J Heal. 2018; 5(2):29–32.

xxvii. Sari F, Ernawati E. Relationship of Mother's Attitudes About Infant and Young Child Feeding (IPM) With Nutritional Status of Infants Under Two Years Old (Under-two children). J Heal. 2018;5(1):77–80.

xxviii. Eppang Y. The Effect of Counseling During Antenatal Care (ANC) on Knowledge and Attitudes of Pregnant Women About Danger Signs of Pregnancy in the Work Area of Kapasa Health Center. Muhammadiyah Nursing Jounal. 2020; 5(2):254–64.

xxix. Dhami MV, Ogbo FA, Osuagwu UL, Agho KE. Prevalence and factors associated with complementary feeding practices among children aged 6-23 months in India: A regional analysis. BMC Public Health. 2019;19(1):1–16.