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Analysis of family roles in infant and child feeding based on sociocultural factors and family functions

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Abstract

The issue of complementary feeding in developing countries is often marked by poor food quality and quantity, leading to growth failure in children during this critical period. This problem is largely due to insufficient family involvement in managing infant and child feeding. This study examines the effects of sociocultural factors and family functions on family roles in feeding practices. The objective was to analyze how sociocultural factors and family functions influence infant and child feeding roles. This study used an observational analytical design with a cross-sectional approach. The population consisted of families with children under two years old in Surabaya, Sidoarjo, and Gresik, Indonesia, with data collection taking place from March to June 2024. From a population of 250, a sample of 120 participants was selected using a purposive sampling technique. Questionnaires that had been validated for reliability and accuracy were used to measure sociocultural variables, family functions, and family roles. Data analysis was performed using multiple linear regression tests. The findings revealed a significant effect of culture on family roles (P=0.026) and a significant effect of family functions on family roles (P=0.025). Additionally, there was a significant combined effect of culture and family functions on family roles (P=0.000). These results indicate that sociocultural factors and family functions positively influence family roles in feeding practices. In essence, stronger cultural values and well-functioning family dynamics contribute to a more effective family role in feeding infants and children. This research highlights the importance of collaborative efforts to strengthen family values and foster positive family functions, which are essential for supporting optimal feeding practices and child growth.

Introduction

Malnutrition in early childhood can have serious implications for human resource quality in the future. This malnutrition is often due to infants and young children not receiving adequate nourishment, as they are not fed according to optimal feeding practices.[1,2] Indonesia's Ministry of Health, following the Global Strategy for Infant and Young Child Feeding (IYCF), recommends a "Gold Standard" feeding approach: early breastfeeding initiation, exclusive breastfeeding for the first six months, introducing nutritious complementary foods at six months, and continued breastfeeding until at least age two.[1,3,4]

Improving children's nutritional status remains a priority for health indicators in Indonesia. While the 2022 nutrition survey showed a decrease in stunting rates by 2023, significant efforts are still needed to achieve the target of reducing stunting to 14% by 2024.[5]

On the other hand, the rates of wasting and underweight in children increased from 2022 to 2023. Key factors influencing these nutritional challenges in children aged 0-23 months include feeding practices such as exclusive breastfeeding, the introduction of complementary foods, and susceptibility to infections.[6]

The practice of feeding infants and children begins with exclusive breastfeeding until six months and is followed by complementary feeding for children aged 6-23 months. A problem in complementary feeding in developing countries is the poor quality of foods, leading to growth failure during the complementary feeding period.[7] According to the 2022 nutrition survey in Indonesia, only 52.2% of mothers initiated breastfeeding within 24 hours of birth, while only 16.7% of children aged 6-11 months received exclusive breastfeeding. Furthermore, 61.6% of these children were given formula milk, 41.7% of children over six months were introduced to complementary feeding, and 47.6% of those under six months received complementary foods. Additionally, only 69.9% of children had access to animal protein, and just 23.1% of children aged 11-23 months had a diverse diet.[6] These figures fall short of both Indonesian and international guidelines for infant and young child feeding, as outlined by IDAI and the WHO.[7,8]

Several factors influence maternal behavior in feeding practices, including knowledge, family income, awareness, cultural customs, family support, and healthcare access.[2,9,10] Research highlights that feeding practices,[11] parenting style, and eating habits can significantly affect children's eating behaviors and growth[12]. Parents' approaches to feeding, parenting style, eating habits, and feeding practices significantly impact children's nutrition and growth, where poor parenting patterns may lead to malnutrition, stunting, and developmental delays.[13-15] Research shows that family involvement, particularly in providing complementary breast milk, affects children's nutritional status, food preferences, and potential food aversions.[15,16] From 2019 to 2023, studies focused on child nutrition and feeding practices, including Tui Na massage therapy to improve weight,[17] feeding practices,[18] complementary feeding acceptance methods,[19] maternal literacy on breastfeeding,[20] complementary food strategies,[21] and family involvement.[22] Most existing studies, however, focus on mother-child dynamics alone, overlooking the broader role of family, culture, and customs in feeding practices, particularly in Indonesia, where diverse cultural traditions shape feeding practices.[16,23] As the husband or head of the family often influences feeding decisions, this study aims to address infant and child feeding issues by exploring sociocultural and family roles emphasizing family-centered care approaches for improved feeding practices.

Materials and Methods

Study design

This study used an analytical observational design with a cross-sectional approach, aiming to explain the influence of sociocultural factors and family functions on family roles. This design involved observing respondents at a single point in time without intervention. Data on cultural values, family functions, and family roles were collected using a questionnaire for parents of young children.

Population and sample

The study population included all mothers with children under the age of two in Surabaya, Gresik, and Sidoarjo, Indonesia, totaling 250 individuals. The participants were Javanese, both Muslim and non-Muslim, aged 20-50 years. Population data were obtained from village records, with no restrictions on demographic pool characteristics. A sample of 120 mothers was selected through purposive sampling. The instruments used to measure sociocultural factors and family functions were validated and tested for reliability. The study was conducted in Surabaya, Sidoarjo, and Gresik, East Java, Indonesia, from March to June 2024. Inclusion criteria were mothers willing to participate and having children without congenital disabilities or illnesses.

Variables

The independent variables were sociocultural factors and family functions, while the dependent variable was the family role.

Instrument and data collection

Validated and reliability-tested questionnaires were used as instruments for assessing sociocultural factors and family functions. Sociocultural factors were defined as family background values, behaviors, and taboos that could affect child feeding. Family functions were defined as family roles in terms of economy, communication, education, protection, and religion in relation to child feeding. The family role was defined as the family's role in educating, supervising, encouraging, and modeling positive behavior related to child feeding practices.[24] The questionnaires used to assess sociocultural factors, family functions, and family roles underwent validity and reliability testing, with Cronbach's alpha values of 0.962

for the family function questionnaire and 0.975 for the family role questionnaire. These questionnaires, adapted from previous research, included 10 questions for sociocultural factors, 27 for family functions, and 12 for family roles. Data collection was done directly after receiving ethical clearance. The research team coordinated with local village leaders, midwives, and child health cadres in Surabaya, Sidoarjo, and Gresik. A field team of eight midwifery students from Nahdlatul Ulama University Surabaya collected data with given tasks and daily food and transportation incentives.

Data analysis

Data were analyzed using bivariate analysis, with a t-test to assess the influence of individual variables and an f-test to assess the combined influence of the independent variables on the dependent variable. A significance level of p=0.05 was used. All data analyses were conducted using SPSS version 20.

Ethical clearance

This research was approved by the Ethical Committee of the Nursing and Midwifery Faculty, Universitas Nahdlatul Ulama, Indonesia, with ethical certification number 019/30/III/EC/KEP/LCBL/2024, dated March 30, 2024.

Results

The study's findings, presented in Table 1, show that most families had two children, while some families had three children living in the same household.

The study results in Table 2, examining family characteristics based on the mother's education level, indicate that the majority of mothers (84.2%) had completed senior high school. Additionally, most of these mothers were not employed or were housewives, accounting for 69.2%.

Table 3 illustrates the distribution of family data based on sociocultural factors, family functions, and family roles. Most families (55%) had a good level of sociocultural support, 75.8% demonstrated good family functions, and 62.5% displayed effective family roles.

According to the partial t-test results, the sociocultural variable (X1) significantly affected family roles (Y), with a p-value of 0.026, which is below the significance level (α=0.05). Similarly, the family function variable (X2) had a significant effect on family roles (Y), with a p-value of 0.025, also below the significance level. The f-test results further indicate that both sociocultural factors and family functions together significantly impact family roles

in infant and child feeding for children under two years old. Specifically, 72.7% of families with good sociocultural factors showed positive effects on family roles in feeding infants and children, while 64.8% of families with strong family functions positively influenced these roles. Thus, families with good sociocultural support and well-functioning dynamics tend to enhance family roles in infant and child feeding. A cross-tabulation between sociocultural variables and family functions on family roles, along with analytical test results using t-test and f-test, is presented in Table 4.

Discussion

The first thousand days of human life, from conception through the age of two, are vital for a child's development. During this period, optimal growth, development, and health heavily depend on adequate nutrition.[25] To promote optimal growth, the World Health Organization (WHO) recommends four essential practices in its Global Strategy for Infant and Young Child Feeding: exclusive breastfeeding until six months, introducing complementary feeding at six months, continuing breastfeeding up to two years, and extending breastfeeding as desired beyond two years.[26,27] Family behaviors and roles in providing appropriate nutrition for infants and young children are influenced by numerous factors, including family health knowledge, sociocultural influences, environment, food availability, and information sources.[28,29]

Cultural influences on public health involve shaping, regulating, and guiding individual behaviors within a community to meet health needs, which includes the nutritional status of children.[30] Our findings reveal that families with strong sociocultural support often have positive impacts on family roles in infant and child feeding (72.7%). This is consistent with research by Natalia (2020),[31] which found that culture accounts for 12.8% of influence in infant feeding practices, reflecting the significance of inherited societal beliefs and practices. Positive feeding practices, guided by beneficial cultural habits, can lead to healthier outcomes, while adverse cultural practices may increase health risks, such as the incidence of diarrhea.[32] Bentley *et al.* (2022) found that decisions on what and how to feed children result from complex interactions between cultural beliefs, economic resources, and the child's appetite, prompting caregivers to adapt to these varying factors[33].

In addition to sociocultural influences, family functions significantly affect family roles in infant and child feeding. The family unit serves as the closest support group, meeting its members' basic needs, particularly in health-related areas.[34] Families bear the responsibility of monitoring and addressing infants' health needs.[35] Friedman identifies five key family

functions: affective, socialization, reproductive, economic, and health care and maintenance.[36] Our study found that families with strong functional support systems positively impact family roles in child nutrition (64.8%). This finding aligns with research by Estingtias *et al.* (2023), which highlights the importance of family roles in complementary feeding practices, necessitating an understanding of parents' views on their childcare responsibilities.[37,38]

Our study also examined family characteristics, finding that most mothers (84.2%) had completed senior high school. Educational attainment affects mothers' perceptions of family roles and approaches to child nutrition, equipping them with skills to seek information and resources to support child health.[39,40] Education influences the ease with which mothers access information on childcare, nutrition, and health maintenance.[41] Additionally, employment status can influence family roles in feeding practices; our study showed that the majority of mothers (69.2%) were not employed, allowing them more time and energy to focus on appropriate feeding for infants and young children. Non-working mothers are often more able to cater to their children's nutritional needs in alignment with their age and health requirements.

The linear regression analysis in this study indicates that sociocultural factors and family functions positively impact family roles in infant and child feeding. Families with strong sociocultural support and functional capabilities are better positioned to provide appropriate nutrition. Strong family roles are critical in supporting proper feeding practices, which directly contribute to the health and growth of infants and young children.[28,42]

Conclusions

Sociocultural factors and family functions positively impact family roles, indicating that when a family has strong sociocultural support and well-functioning dynamics, its roles in infant and child feeding are more effective. Ensuring that infants and young children receive high-quality nutrition is essential for supporting their growth and development and helping them achieve an optimal nutritional status for their age. To support this, it is recommended to implement a community-based family-strengthening program focused on reinforcing positive cultural values and enhancing parenting skills through counseling and educational activities for families.

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Table 1. Characteristics of families based on the number of children and household members.

	n	%
The Number of children		
1	18	15
2	58	48.3
3	44	36.7
The Number of Household member		
2	1	0.8
3	46	38.3
4	40	33.3
5	32	262.7
6	1	0.8
Total	120	100

Table 2. Characteristics of families based on mother's education and occupation.

	n	%
Mother's Education		
Senior High School	89	84.2
Diploma (D3)	1	0.8
Bachelor (S1)	29	24.2
Master (S2)	1	0.8
Mother's Occupation		
Lecturer	1	0.8
Housewife	83	69.2
Private Employee	19	15.8
Entrepreneur	17	14.2
Total	120	100

Table 3. Distribution of family data based on sociocultural factors, family functions, and family roles.

	n	%
Sociocultural Factors		
Poor	4	3.3
Fair	50	41.7
Good	66	55
Family Functions		
Poor	4	3.3
Fair	25	25
Good	91	75.8
Family Roles		
Poor	17	14.2
Fair	28	23.3
Good	75	62.5
Total	120	100

Table 4. Cross tabulation between sociocultural factors and family functions on family roles.

Variable	**Family Roles**						**Total**		**t-test**	**f-test**
	Poor		**Fair**		**Good**					
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**		
Socio-cultural									0.026	0.00
Poor	3	75	0	0	1	25	4	100		
Fair	10	20	14	28	26	52	50	100		
Good	4	6.1	14	21.2	48	72.7	66	100		
Family Functions									0.025	
Poor	3	75	1	25	0	0	4	100		
Fair	6	24	3	12	16	64	25	100		
Good	8	8.8	24	26.4	59	64.8	91	100		