# EVALUATING CADRE SUPPORT IN MATERNAL FEEDING PRACTICES: INFLUENCE ON EATING PATTERN OF CHILDREN UNDER TWO

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***ABSTRACT***

*Stunting remains a significant global health concern among children under two years old, underscoring the importance of maternal skills in food preparation to prevent this issue. This study evaluated the impact of Posyandu cadre training and support on maternal capacity and its relationship with Infant and Young Child Feeding (IYCF) practices. Seventy mothers and their children under the age of two, along with ten cadres, participated in this study. The intervention began with cadre training, followed by support for mothers. The results revealed that cadre knowledge of* food material science (FMS) (p=0.033) *and attitudes toward* clean and healthy behavior (CHB) (p=0.038) *significantly improved after training. Mothers demonstrated significant improvements in* knowledge of FMS (p<0.001), Nutritional Requirements of Children Under Two (NRCT) (p<0.001), and CHB (p=0.041)*;* attitudes toward complementary feeding (CF) (p=0.030)*. C*adre knowledge and maternal knowledge in FMS *was found a significant correlation* (p=0.026)*. However, cadre attitudes did not correlate with the knowledge and attitudes of the mother. The age of children under two was correlated with MMD (p=0.036), MMF (p=0.017), and MAD (p=0.036). Additionally, maternal attitudes toward food were associated with MMF (p=0.037) and dietary diversity (p=0.034) in children under the age of two. These findings underscore the significance of cadre training and maternal support programs in enhancing feeding practices, which may lead to improved nutritional outcomes. Strengthening* the cadre's knowledge and skills could be key to *promoting optimal IYCF practices.*

***Keywords:*** *Children under Two, Cadre, Minimum Acceptable Diet, Minimum Dietary Diversity, Minimum Meal Frequency*

## INTRODUCTION

Malnutrition caused nearly half of the deaths of children under two years of age. Stunting has been identified as the most prevalent form of malnutrition with approximately 161 million children globally experiencing stunting (Mistry et al., 2019). Indonesia has experienced a gradual decline in the prevalence of stunting. In 2013, the prevalence of stunting was 37.2%, which decreased to 30.8% in 2018 and further declined to 21.5% in the most recent report from 2023 (The Indonesian Ministry of Health, 2018, 2023)

The prevalence of child stunting in Indonesia has remained high over the past decades. Reports on stunting incidence based on length-for-age (LAZ) among children aged 0-23 months indicate a rate of 12.9% nationally, while the prevalence of nutritional status in children under five years of age with stunting incidence in West Java is 21.7%, and in Bogor District is 27.6% (The Indonesia Ministry of Health, 2023).

Food security is a key factor in determining nutritional status. Families with sufficient food security, on average, have good nutritional status (Arlius et al., 2017). Low family food security can be attributed to a lack of food access, food utilization, and family food diversity (Al Faiqoh et al., 2018).

Research suggests that sociocultural factors have a substantial impact on household food security and consumption patterns. Religious and cultural practices shape dietary preferences and can impact food availability in rural communities (Tembo et al., 2024). Culture influences all

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dimensions of food security, including utilization, stability, availability, and access, with gender and family dynamics playing crucial roles (Briones Alonso et al., 2017). While the magnitude of cultural effects on food security remains unclear, incorporating these factors into policy-making could lead to more effective interventions (Briones Alonso et al., 2017; Tembo et al., 2024).

To improve mothers' knowledge and skills, integrated service posts (*Posyandu*) and their staff are crucial, as they interact directly with the community daily. Cadres are *Posyandu* staff members who are closely connected to the community and serve as trustworthy reference sources. Research shows that cadre training intervention programs can significantly enhance cadre knowledge (Rahmawati & Sartika, 2020).

The enhancement of *Posyandu* cadres' capacity is expected to support the dissemination of knowledge and train mothers of children under two years of age in their working areas, as demonstrated by a study conducted in Bangladesh reporting the effectiveness of counseling mothers on proper infant feeding practices to reduce the prevalence of stunting in children (Mistry et al., 2019).

Children ages 0-23 months are in a critical period in their development. It is recommended that children consume exclusive breastfeeding and adequate, nutritious complementary foods. The proportion of children receiving exclusive breastfeeding, starting complementary feeding at six months of age, and consuming diverse foods is still relatively low, with rates of 52%, 44.7%, and 52.5%, respectively (The Indonesian Ministry of Health, 2021)

Based on the global Infant and Young Child Feeding (IYCF) strategy, three indicators are used to assess complementary feeding practices in children aged 6 to 23 months.: Minimum Dietary Diversity for Children (MDD-C), Minimum Meal Frequency (MMF), and Minimum Acceptable Diet (MAD). The practice of complementary feeding refers to WHO (2003).

Socioeconomic and demographic factors, including maternal education, household wealth, area of residence, and child's age, significantly influence these practices (Ahmad et al., 2017; Akanbonga et al., 2023). Notably, MDD appears to have a more substantial impact on nutritional outcomes compared to MMF (Jain et al., 2020). Regional variations in IYCF practices underscore the need for targeted interventions (Akanbonga et al., 2023; Jain et al., 2020). Improving IYCF practices is crucial for achieving nutrition-related Sustainable Development Goals (Akanbonga et al., 2023).

Multiple studies have demonstrated that training significantly enhances The ability of cadres to detect stunting and its risk factors (Sopiatun & Maryati, 2021; Tampake et al., 2021). Well-trained cadres play a important role in community education and stunting prevention, highlighting cadre training as an effective strategy for reducing stunting prevalence. Research indicates that cadre training has a substantial impact on efforts to reduce stunting in Indonesia. Training interventions have been shown to improve cadres' knowledge, self-efficacy, and practices related to stunting prevention (Purnamasari et al., 2020; Sopiatun & Maryati, 2021).

This program was conducted to improve family food security by strengthening the capacity of *Posyandu* cadres who will consistently serve as educators and nutrition counselors for families with children under two years of age. Coherent with the program, research was conducted to evaluate the impact of cadre training and support on maternal capacity and its relationship IYCF practices.

## METHOD

This study employs a quantitative research approach, utilizing a pre-experimental technique with a one-group pretest-posttest design. The research was conducted in Sukadamai Village, Dramaga District, Bogor Regency, which is considered a locus of stunting. The study commenced with the training of *Posyandu* cadres on knowledge and attitudes toward child feeding, followed by a pre-test and a post-test to evaluate the changes in knowledge and attitudes among the trained cadres.

*Posyandu* cadre training must be conducted regularly, with priority given to cadre members, as mothers with toddlers tend to have closer interactions with cadres than with other healthcare workers. To ensure sustainability and effectiveness

in *Posyandu*, this training should be proposed as a permanent program within an integrated service post in Indonesia. Support and education were provided to mothers of children under two years of age in small groups, with one group consisting of one *Posyandu* cadre accompanying seven mothers. Support was conducted through four scheduled face-to-face meetings and two home visits.

The population of this study consisted of two groups: (1) *Posyandu* cadres and (2) families with children aged 6-24 months. The research respondents consisted of (1) *Posyandu* cadres willing to participate and (2) mothers with children under two years of age willing to be interviewed. The research subjects included (1) *Posyandu* cadres, (2) mothers of children under two years of age, and (3) children under two years of age.

The sample selection criteria include mothers of children under two who are willing to participate in an interview. However, a potential bias in recruitment arises from respondents' voluntary participation. This may result in selecting only those cadres and mothers who are more motivated or have a higher level of nutrition awareness, thereby limiting the generalizability of the research findings. According to the calculation formula, the minimum number of required subjects is 70 mothers and 70 infants each, while the number of cadre subjects involved in the study was 70 individuals.

Training to enhance the capacity of Posyandu cadres in knowledge and practices of child feeding was conducted through seminars and workshops. The data collected includes food materials science (FMS), nutritional requirements of children under two years (NRCT), complementary feeding (CF), and clean and healthy behaviors (CHB). Data were collected from cadres regarding their knowledge and attitudes, while data from mothers included knowledge, attitudes, and practices. A 24-hour recall was conducted among mothers of children under two years of age to determine the food their children had consumed in the previous 24 hours. The data was categorized based on the global Infant and IYCF strategy using the MDD for children, MMF, and MAD methods. Data were processed using Microsoft Office Excel and the Statistical Package for the Social Sciences (SPSS). Pre and post-test analysis related to knowledge, attitudes and practices of cadres and mothers before and after training and support using the Wilcoxon Signed Rank Test, analysis of the relationship between cadre training with mothers' knowledge, attitudes and practices using the Spearman test as well as the study of the relationship between knowledge, attitudes and practices of mothers towards IYCF toddlers, p-value <0.05 is said to have a relationship.

## RESULTS AND DISCUSSION

Based on the characteristics of the cadres as shown in Table 1, most were within the 38-50 year age group, comprising 90%.

Seventy percent of cadres completed high school or equivalent. Serving time as a cadre was ≤10 years, including 90% of individuals. 90% of the cadres had previously completed training. The cadres had previously attended training to provide technical support to healthcare workers, enhancing their capacity to deliver quality and improved healthcare services.

Table 2 shows the characteristics of the families. The most dominant age group for mothers is 26-35, at 51.4%, followed by the 17-25 age group, at 27.1%. Most mothers have an elementary school or equivalent education level, at 50%, while the lowest is a university or academy education, at 2.9%.

This aligns with data from BPS in the report 'Bogor Regency in Numbers', indicating that in 2023, the Gross Enrollment Rate of the population with an education level of elementary school was

**Table 1.** Characteristics of Cadres

| Variable | n | (%) |
|---|---|---|
| **Age** | | |
| 15-18 years | 0 | 0 |
| 19-29 years | 1 | 10 |
| 30-49 years | 9 | 90 |
| 50-64 years | 0 | 0 |
| **Education** | | |
| Completing Junior High School | 3 | 30 |
| Completing Senior High School | 7 | 70 |
| **Serving Duration** | | |
| 0-10 Years | 9 | 90 |
| 11-20 Years | 1 | 10 |
| **Previous Training** | | |
| Yes | 9 | 90 |
| No | 1 | 10 |

**Table 2.** Characteristics of Families

| Variable | n | (%) |
|---|---|---|
| **Mother's Age** | | |
| 15-18 years | 1 | 1.4 |
| 19-29 years | 34 | 48.5 |
| 30-49 years | 35 | 50 |
| 50-64 years | 0 | 0 |
| **Mother's Education** | | |
| Elementary School | 35 | 50 |
| Junior High School | 17 | 24.3 |
| Senior High School | 16 | 22.9 |
| University/Academy | 2 | 2.9 |
| **Mother's Occupation** | | |
| Housewife | 61 | 87.1 |
| Farm/Laborer | 6 | 8.6 |
| Entrepreneur/Trader | 1 | 1.4 |
| Civil Servant/ | 0 | 0 |
| Military/Police | 0 | 0 |
| Private Employee | 0 | 0 |
| Other | 2 | 2.9 |

**Table 3.** Characteristics of the Children under Two

| Variables | n | (%) |
|---|---|---|
| **Age** | | |
| 6-11 months | 30 | 42.9 |
| 12-23 months | 40 | 57.1 |
| Average | 12.7 | |
| Deviation Standard | 4.6 | |
| **Gender** | | |
| Male | 38 | 54.3 |
| Female | 32 | 45.7 |
| **Birth Weight** | | |
| < 2.5 kg | 14 | 20 |
| ≥ 2.5 kg | 56 | 80 |
| Average | 2.9 | |
| Deviation Standard | 0.5 | |
| **Birth Length** | | |
| < 48 cm | 20 | 28.6 |
| 48-52 cm | 49 | 70 |
| >52 cm | 1 | 1.4 |
| Average | 48 | |
| Deviation Standard | 3.2 | |

103.88, junior high school was 99.2, and senior high school was 70.79 (BPS, 2024). The most common occupation for mothers is housewives, at 87.1%, followed by farmers and laborers, at 8.6%.

Table 3 presents the characteristics of the children, where 57.1% are aged 12-23 months, and the rest are 6-11 months. The gender distribution indicates that 54.3% of the population is male and 45.7% is female. In 2023, the population in the Dramaga District consisted of approximately 58,000 males and around 54,000 females (BPS, 2024). The weight of infants was measured to determine the occurrence of Low Birth Weight (LBW). It was found that 20% of infants were born with weighing less than 2.5 kilograms, and 80% were born with a weight of 2.5 kilograms or more. The most dominant infant body length was 48-52 cm, representing 70% of the respondents.

The difference in knowledge and attitudes of cadres before and after the training was measured to determine the changes. Cadres' lack of knowledge and proper attitudes can be attributed to the insufficient information they obtained. As Table 4 indicates, there were changes in FMS (p=0.033) and attitudes toward CHB (p=0.038) before and after the support intervention.

This aligns with a study indicating that an intervention program in the form of cadre training can enhance the knowledge of cadres in many aspects (Rahmawati & Sartika, 2020).

Adequate knowledge can enhance the performance of cadres. Training plays a significant role in cadres' performance, as cadres who have undergone training tend to demonstrate satisfactory performance (Lukwan, 2018). By enhancing the capacity of *Posyandu* cadres, they are expected to disseminate their knowledge and train mothers in their respective areas of work.

Based on the results of analysis presented in Table 5, there is a difference between the pre- and post-support periods for mothers in terms of knowledge, attitudes, and practices. However, not all evaluated aspects appear to have changed.

Some components that showed differences included knowledge of FMS (p<0.001), NRCT (p<0.001), and CHB (p=0.041); additionally, changes were also observed in attitudes towards CF (p<0.030).

Knowledge related to food materials science in mothers can lead to inadequate family food utilization, which can ultimately affect the nutritional status of children under two years of age (Al Faiqoh et al., 2018). This is supported by research conducted in Jakarta, reporting a significant relationship between mothers' knowledge of nutrition and the nutritional status children under five years old (Siagian & Halisitijayani, 2015).

**Table 4.** Difference in Knowledge and Attitudes of Cadres Before and After Training

| Variable | Pre | Post | *P-value* |
|---|---|---|---|
| **Knowledge** | | | |
| FMS | 1.9 | 2.7 | 0.033* |
| NRCT | 2.8 | 2.9 | 0.564 |
| CF | 3.2 | 3.8 | 0.084 |
| CHB | 9 | 9.2 | 0.480 |
| **Attitude** | | | |
| FMS | 5.2 | 5.6 | 0.339 |
| NRCT | 5.4 | 5.4 | 0.890 |
| CF | 6.4 | 6.9 | 0.163 |
| CHB | 19.3 | 20 | 0.038* |

Note: *Wilcoxon Signed-Rank,* sig. p<0.05

**Table 5.** Difference in Knowledge and Attitudes of Mothers Before and After the Support

| Variable | Pre | Post | *P-value* |
|---|---|---|---|
| **Knowledge** | | | |
| FMS | 65.4 | 83.9 | <0.001* |
| NRCT | 68.1 | 79.1 | <0.001* |
| CF | 68.5 | 68.2 | 0.851 |
| CHB | 76.1 | 80.6 | 0.041* |
| **Attitude** | | | |
| FMS | 93.8 | 94.3 | 0.978 |
| NRCT | 77.5 | 79.9 | 0.241 |
| CF | 79.6 | 84.5 | 0.030* |
| CHB | 95.1 | 95.5 | 0.742 |

Note: *Wilcoxon Signed-Rank,* sig. p<0.05

Another study indicated that mothers' knowledge not only influences their child's nutritional status in early childhood but also continues to impact their nutritional status until high school (Prasetya & Khomsan, 2021). Parents and caregivers, such as mothers, ideally understand their children's nutritional needs well.

The attitudes toward complementary feeding (CF) practiced by mothers also appeared to change after the support, where positive changes enhanced the quality of complementary feeding for children under two years. The quality of food plays a more critical role in the nutritional status of children under two years compared to the quantity of food, indicating that the quality of complementary foods alongside breastfeeding influences the growth and development of the children (Lutter & Rivera, 2003).

Many challenges can affect mothers' skills in providing complementary feeding (CF). A study conducted in Bogor reported the significant effect of commercial complementary foods on the intake of infant micronutrients compared to home-prepared foods by mothers, indicating the lack of knowledge and skills in mothers' feeding practices for preparing nutritious food (Saidin & Muherdiyantiningsih, 2008).

Cadre training can be one way to enhance the knowledge and attitudes of mothers. The analysis results presented in Table 6 indicate a significant relationship between cadres' knowledge and mothers' knowledge regarding FMS (p=0.026). However, there is no significant relationship between the mothers' attitudes and the cadres' knowledge.

A study conducted in Bengkulu regarding mothers' knowledge and attitudes toward complementary feeding (CF) revealed significant differences between the intervention group and the control group in terms of expertise (p=0.001) and attitudes (p=0.018). Nutrition education has a positive influence on the knowledge and attitudes of mothers in providing complementary foods to children under two years of age (Jumiyati & Yulianti, 2016).

Other research has also found a significant relationship between interpersonal communication among mothers of toddlers and their participation (p<0.005). Factors associated with the level of maternal involvement in *Posyandu* activities included cadre empathy (p=0.002), supportive attitudes of cadres towards mothers (p=0.003), positive cadre attitudes (p<0.001), and attitudes of equality (p=0.003). Additionally, logistic regression testing demonstrated that cadre empathy has a relationship of 8.616 times (2.352-31.569) with the participation of mothers in *Posyandu* activities (Bukhari et al., 2019).

As Table 7 indicates, cadre attitudes do not correlate with mothers' knowledge and attitudes regarding components such as FMS, NRCT, CF, and CHB. This lack of correlation may be due to the pre- and post-training cadre analysis results, as seen in Table 4, which indicate that only the attitude towards clean and healthy behavior differs. At the same time, the other components show no differences.

In rural Indonesian communities, mothers of toddlers attend integrated service post sessions, where trained cadres provide critical information

**Table 6.** Relationship between Cadres' Knowledge, Mothers' Knowledge, and Attitudes

| Variable | FMS | | NRCT | | CF | | CHB | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **Knowledge** | | | | | | | | |
| Low | 4 | 5.7 | 6 | 8.6 | 25 | 35.7 | 4 | 5.7 |
| Moderate | 26 | 37.1 | 32 | 45.7 | 27 | 38.6 | 34 | 48.6 |
| Good | 40 | 57.1 | 32 | 45.7 | 18 | 25.7 | 32 | 45.7 |
| p-value | 0.026* | | 0.751 | | 0.832 | | 0.832 | |
| **Attitude** | | | | | | | | |
| Negative | 0 | 0 | 2 | 2.9 | 4 | 5.7 | 0 | 0 |
| Netral | 10 | 14.3 | 36 | 51.4 | 31 | 44.3 | 4 | 5.7 |
| Positive | 60 | 85.7 | 32 | 45.7 | 35 | 50 | 66 | 94.3 |
| p-value | 0.164 | | 0.334 | | 0.059 | | 0.276 | |

Note: **Spearman rank,* sig. p<0.05

**Table 7.** Relationship between Cadres' Attitudes and Mothers' Knowledge and Attitudes

| Variable | FMS | | NRCT | | CF | | CHB | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| **Knowledge** | | | | | | | | |
| Low | 4 | 5.7 | 6 | 8.6 | 25 | 35.7 | 4 | 5.7 |
| Moderate | 26 | 37.1 | 32 | 45.7 | 27 | 38.6 | 34 | 48.6 |
| Good | 40 | 57.1 | 32 | 45.7 | 18 | 25.7 | 32 | 45.7 |
| p-value | 0.216 | | 0.681 | | 0.837 | | 0.428 | |
| **Attitude** | | | | | | | | |
| Negative | 0 | 0 | 2 | 2.9 | 4 | 5.7 | 0 | 0 |
| Netral | 10 | 14.3 | 36 | 51.4 | 31 | 44.3 | 4 | 5.7 |
| Positive | 60 | 85.7 | 32 | 45.7 | 35 | 50 | 66 | 94.3 |
| p-value | 0.946 | | 0.224 | | 0.600 | | 0.753 | |

Note: **Spearman rank,* sig. p<0.05

on IYCF. However, economic constraints that limit access to nutrient-rich foods pose significant challenges to adhering to the recommended feeding practices outlined in the training. Additionally, entrenched traditional beliefs within households, particularly those upheld by elder family members, perpetuate long-standing feeding practices that may not align With contemporary nutrition guidelines (Aborigo et al., 2012; Shittu et al., 2024).

At a broader level, systemic and structural barriers further impede the sustainability of improved nutritional practices. Constraints related to food security, socioeconomic disparities, and geographic accessibility limit the feasibility of adopting enhanced dietary behaviors (Darnton-Hill & Samman, 2015; Kris-Etherton et al., 2020).

Additionally, deeply rooted cultural norms and family hierarchies often place decision-making authority in the hands of elder household members, thereby diminishing maternal autonomy in implementing optimal feeding strategies (Aubel, 2012; Jama et al., 2018; Wehr et al., 2014).

The results of this study align with previous research on the role of healthcare providers in promoting exclusive breastfeeding among mothers, indicating that there is no significant relationship between healthcare provider support and exclusive breastfeeding. This is likely due to the low level of healthcare provider involvement in providing information on exclusive breastfeeding (Mony et al., 2021).

Table 8 presents the characteristics of the children, including gender, age, birth weight, and birth length. These variables were analyzed to determine their relationship with IYCF indicators. The results showed that the age of children has a significant relationship with MMD (p=0.036), MMF (p=0.017), and MAD (p=0.036). These results align with the WHO's recommendations, which state that each age group has different food requirements.

It is recommended that infants start receiving complementary feeding at six months, starting with complementary foods 2–3 times a day at 6–8 months and increasing to 3–4 times a day at 9–11 months and 12–24 months. Nutritious snacks are provided 1–2 times daily for ages 12–24 months. By 12 months of age, most children can eat the same foods as other family members, but still meet the need for nutrient-dense foods including animal-source foods. (WHO, 2024).

Furthermore, Table 9 shows that the mothers' attitude toward food was associated with MMF (p=0.037) and dietary diversity (p=0.034). These results align with previous research explaining that bivariate analysis using the Chi-square test indicates a relationship between mothers' knowledge and the accuracy of providing complementary feeding to infants (Sulistyorini, 2022). Therefore, accurate information is needed, especially from healthcare providers, to enhance mothers' knowledge of children under two years of age and prevent inaccuracies in providing complementary feeding.

**Table 8.** Relationship between the Characteristics of the Children under Two Regarding Indicators of Infant and Young Child Feeding (IYCF)

| Variable | MDD (Sufficient) | | MDD (Insufficient) | | MMF (Sufficient) | | MMF (Insufficient) | | MAD (Sufficient) | | MAD (Insufficient) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % | n | % | n | % |
| **Gender** | | | | | | | | | | | | |
| Boy | 16 | 22.9 | 22 | 31.4 | 35 | 50 | 3 | 4.3 | 16 | 22.9 | 22 | 31.4 |
| Girl | 14 | 20 | 18 | 25.7 | 29 | 41.4 | 3 | 4.3 | 14 | 20 | 18 | 25.7 |
| p-value | 0.892 | | | | 0.829 | | | | 0.892 | | | |
| **Age** | | | | | | | | | | | | |
| 6-11 months | 9 | 12.9 | 21 | 30 | 24 | 34.3 | 6 | 8.6 | 9 | 12.9 | 21 | 30 |
| 12-23 months | 21 | 30 | 19 | 27.1 | 40 | 57.1 | 0 | 0 | 21 | 30 | 19 | 27.1 |
| p-value | 0.036* | | | | 0.017* | | | | 0.036* | | | |
| **Birth Weight** | | | | | | | | | | | | |
| Low Birth Weight | 5 | 7.1 | 9 | 12.9 | 12 | 17.1 | 2 | 2.9 | 5 | 7.1 | 9 | 12.9 |
| No Low Birth Weight | 25 | 35.7 | 31 | 44.3 | 52 | 74.3 | 4 | 5.7 | 25 | 35.7 | 31 | 44.3 |
| p-value | 0.873 | | | | 0.700 | | | | 0.873 | | | |
| **Birth Length** | | | | | | | | | | | | |
| Short | 8 | 11.4 | 12 | 17.1 | 18 | 25.7 | 2 | 2.9 | 8 | 11.4 | 12 | 17.1 |
| Normal | 22 | 31.4 | 27 | 38.6 | 45 | 64.3 | 4 | 5.7 | 22 | 31.4 | 27 | 38.6 |
| Long | 0 | 0 | 1 | 1.4 | 1 | 1.4 | 0 | 0 | 0 | 0 | 1 | 1.4 |
| p-value | 0.910 | | | | 0.554 | | | | 0.910 | | | |

Note: **Spearman rank,* sig. p<0.05

**Table 9.** Relationship between Mothers' Knowledge, Attitudes, and Practices Regarding Indicators of Infant and Young Child Feeding

| Variable | MDD | MMF | MAD | DD |
|---|---|---|---|---|
| **Knowledge** | | | | |
| FMS | 0.189 | 0.334 | 0.189 | 0.468 |
| NRCT | 0.167 | 0.689 | 0.167 | 0.374 |
| CF | 0.787 | 0.023 | 0.787 | 0.116 |
| CHB | 0.588 | 0.589 | 0.588 | 0.634 |
| **Attitude** | | | | |
| FMS | 0.071 | 0.037* | 0.071 | 0.034* |
| NRCT | 0.554 | 0.731 | 0.554 | 0.622 |
| CF | 0.824 | 0.710 | 0.824 | 0.632 |
| CHB | 0.825 | 0.350 | 0.825 | 0.791 |

Note: **Spearman rank,* sig. p<0.05; DD = dietary diversity

## CONCLUSION

In this study, several components showed variations, including differences in knowledge of FMS, NRCT, and CHB. Additionally, changes were observed in attitudes toward cystic fibrosis (CF). The relationship between cadres' knowledge and mothers' knowledge regarding FMS, as well as mothers' attitudes, reveals a significant correlation, while mothers' attitudes show no correlation with cadres' knowledge. Cadres' attitudes showed no significant relationship with mothers' knowledge and attitudes. The age of children is linked to MMD, MMF, MAD, and dietary diversity. Furthermore, the attitudes toward food materials are associated with MMF and dietary diversity among children under two.

Suggestions from this study to assess whether improvements lead to sustainable behavioral changes among mothers and cadres include conducting long-term evaluations, such as longitudinal studies with repeated measurements. Additionally, a control group is necessary to compare the nutrition and health practices of mothers and cadres who receive training with those of those who do not, to determine whether there are significant differences. Ultimately, community involvement and engagement with stakeholders, such as Puskesmas and local governments, are essential to ensuring the sustainability of this program.

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