INFLUENCE OF MATERNAL OCCUPATION ON KNOWLEDGE AND PRACTICE OF INFANT WEANING AMONG MOTHERS ATTENDING PRIMARY HEALTH CARE CENTERS IN ANAMBRA STATE

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Abstract

Maternal knowledge of appropriate infant weaning practices is essential for ensuring optimal growth, cognitive development, and nutritional well-being of infants while reducing their susceptibility to infections and the risk of long-term adverse health outcomes. This study assessed the influence of maternal occupation on the level of knowledge and infant weaning practices among mothers attending welfare clinics in Primary Health Care Centres across the three senatorial zones of Anambra State, Nigeria. A descriptive cross-sectional study design was employed among 260 mothers accessing child welfare services. Data were collected using a structured questionnaire and analyzed using SPSS version 21. Descriptive and inferential statistics were used, with statistical significance set at $p < 0.05$ and a 95% confidence interval. The findings revealed that all respondents demonstrated a high level of knowledge regarding infant weaning; however, only a moderate proportion reported appropriate infant weaning practices. Furthermore, no statistically significant association was found between maternal occupation and infant weaning practices ($\chi^2 = 2.455$, $p = 0.484$). These findings suggest that although mothers possess adequate knowledge of infant weaning, this knowledge does not consistently translate into optimal practice, irrespective of occupational status. The study underscores the need for sustained health education and behavior-focused interventions aimed at improving the adoption of appropriate infant weaning practices among mothers attending welfare clinics.

***Key words:** Infant weaning, Weaning practices, Maternal occupation, Maternal knowledge, Primary healthcare, Nigeria*

Introduction

Optimal infant feeding practices are essential for ensuring healthy growth, cognitive development, and overall well-being during early childhood. Mothers play a central role in determining the nutritional status of their children because their knowledge, attitudes, and feeding decisions directly influence infant health outcomes (Nyakundi, Chege & Ogada, 2019). Appropriate weaning practices help provide the nutrients required for healthy brain and physical development, reduce susceptibility to infections, prevent long-term nutritional deficiencies, and support optimal growth and development.

The World Health Organization (WHO, 2018) recommends exclusive breastfeeding for the first six months of life, followed by the timely introduction of safe, adequate, and nutritionally appropriate complementary foods while breastfeeding continues. Introducing complementary foods either too early or too late may expose infants to nutritional deficiencies, infections, and increased risks of morbidity and mortality. Consequently, appropriate weaning practices are critical during the first 1,000 days of life, a period recognized as vital for child growth and development (Ahmed, Sadeta & Lembo, 2022).

Several factors influence mothers' knowledge and practice of infant weaning, including educational level, socioeconomic status, cultural beliefs, family characteristics, and occupation (Nyakundi, Chege & Ogada, 2019). Maternal occupation is particularly important because it may affect the time available for childcare, access to health information, financial resources, and the ability to adhere to recommended infant feeding practices. Previous studies have reported significant associations between maternal occupation and weaning practices among mothers in different settings (Aina et al., 2017; Leelavathi, 2019). Similarly, Naah, Kyereme and Adjei (2019) found that maternal socioeconomic characteristics significantly influenced infant feeding practices.

Poor weaning practices may result in protein-energy malnutrition, micronutrient deficiencies, diarrhoeal diseases, allergies, and impaired growth and development (Boma, Atafo & Okari, 2022). In response to these challenges, several interventions and policies, including the Baby-Friendly Hospital Initiative (BFHI) and the National Policy on Infant and Young Child Feeding (IYCF), have been implemented in Nigeria to promote optimal infant feeding practices. Despite these efforts, childhood malnutrition and its associated health consequences remain major public health concerns.

Although studies conducted in other parts of Nigeria have reported significant relationships between maternal occupation and infant weaning practices, evidence from the South-East region remains limited. Furthermore, the persistence of malnutrition

despite existing interventions highlights the need to identify factors that may influence infant feeding behaviours. Therefore, this study investigated the relationship between maternal occupation and infant weaning practices among mothers attending welfare clinics in Anambra State, South-East Nigeria.

Materials and Methods

A descriptive cross-sectional survey design was adopted for this study. The study was conducted in Anambra State, located in the South-East geopolitical zone of Nigeria. Anambra State has an estimated population of 4,177,828 and is administratively divided into three senatorial zones: Anambra North, Anambra Central, and Anambra South (Ministry of Information, 2021).

The study was carried out in Primary Health Care (PHC) centres located within one selected Local Government Area (LGA) from each of the three senatorial zones of the state. The selected LGAs were Nnewi North (Anambra South Senatorial Zone), Idemili South (Anambra Central Senatorial Zone), and Onitsha South (Anambra North Senatorial Zone). These PHC centres provide maternal and child health services, including immunization, growth monitoring, nutrition counselling, and infant welfare clinics where mothers and caregivers receive routine child healthcare services.

The study population comprised all weaning mothers attending infant welfare clinics in the selected Primary Health Care centres across the three selected LGAs. A total population of 740 eligible mothers was recorded during the study period. The sample size was determined using Taro Yamane's formula:

$n = N / [1 + N(d^2)]$

Where:

n = Sample size

N = Population size (740)

d = Level of precision (0.05)

Therefore:

$n = 740 / [1 + 740(0.05^2)]$

$n = 740 / [1 + 1.85]$

$n = 740 / 2.85$

$n = 259.64 \approx 260$

Thus, a sample size of 260 mothers was used for the study.

A multistage sampling technique was employed.

Stage One

One Local Government Area was selected from each of the three senatorial zones of Anambra State using simple random sampling. The selected LGAs were Nnewi North, Idemili South, and Onitsha South.

Stage Two

Stratified proportionate sampling was used to determine the number of respondents selected from each Primary Health Care centre based on the proportion of weaning mothers attending the facility.

Sample from each stratum = (Population of stratum ÷ Total population) × Sample size

Stage Three

Eligible respondents were selected using simple random sampling (balloting method) during infant welfare clinic sessions until the required sample size was attained.

Inclusion Criteria

Mothers with children aged 0–24 months.

Mothers who had resided in the study area for at least six months.

Mothers who consented to participate in the study.

Exclusion Criteria

Mothers of preterm infants.

Mothers whose children had congenital abnormalities affecting feeding.

Mothers who declined participation.

Data were collected using a structured questionnaire developed by the researchers based on the study objectives and relevant literature. The questionnaire consisted of two sections:

a. Section A contained eight items assessing mothers' knowledge of infant weaning practices.
b. Section B contained six items assessing infant weaning practices among the respondents.
c. Responses were measured using a dichotomous Yes/No format.

Face and content validity of the questionnaire were established by three experts in Public Health and Child Health. Their observations and recommendations were incorporated before final administration of the instrument. A pilot study was conducted among 20 weaning mothers attending an infant welfare clinic outside the study area. The split-half reliability method was used, and internal consistency was determined using Cronbach's alpha coefficient. A reliability coefficient of 0.80 was obtained, indicating good reliability of the instrument.

An introductory letter was obtained from the Director of Medical Services. Two research assistants were trained on the objectives of the study and data collection procedures. Data collection was conducted during infant welfare clinic days in the selected PHC centres. Eligible mothers were informed about the purpose of the study and invited to participate. Written informed consent was obtained before questionnaire administration. Mothers who were unable to read or write were assisted by trained research assistants. Completed questionnaires were retrieved immediately after completion, resulting in a 100% response rate.

Data were entered and analyzed using Statistical Package for the Social Sciences (SPSS) version 21. Descriptive statistics, including frequencies and percentages, were used to summarize the data. The relationship between maternal occupation and infant weaning practices was tested using the Chi-square (χ^2) test at a significance level of $p < 0.05$.

Ethical approval for the study was obtained from the National Open University, Awka Study Centre. Permission was also obtained from the management of the selected Primary Health Care centres. Informed consent was obtained from all participants prior to data collection. Participation was voluntary, and respondents were assured of anonymity, confidentiality, and their right to withdraw from the study at any stage without any consequences.

Results and Discussions

Table 1: Summary of Knowledge of Infant Weaning among Mothers by Occupation

Occupation	Knowledge Score (%)	Knowledge Level
Civil Servant	92.5	Very High
Trader	92.1	Very High
Farmer	71.3	High
Unemployed	89.1	Very High

Note: 0–39% = Low; 40–59% = Moderate; 60–79% = High; ≥80% = Very High.

Results in Table 1 show that civil servants (92.5%), traders (92.1%), and unemployed mothers (89.1%) had a very high level of knowledge of infant weaning, while farmers

(71.3%) had a high level of knowledge. The findings indicate that all occupational groups possessed at least a high level of knowledge of infant weaning, although the level of knowledge varied across occupations.

Table 2: Summary of Infant Weaning Practice among Mothers by Occupation

Occupation	Practice Score (%)	Practice Level
Civil Servant	56.3	Moderate
Trader	52.8	Moderate
Farmer	60.8	Moderate
Unemployed	54.6	Moderate

Note: 0–39% = Low; 40–69% = Moderate; ≥70% = High.

Results in Table 2 show that infant weaning practice was moderate among all occupational groups. Farmers recorded the highest practice score (60.8%), followed by civil servants (56.3%), unemployed mothers (54.6%), and traders (52.8%). Overall, the findings suggest that mothers demonstrated a moderate level of infant weaning practice irrespective of occupation.

Table 3: Chi-Square Test of Relationship between Occupation and Infant Weaning Practices

Variable	χ^2	df	p-value	Decision
Occupation and Infant Weaning Practice	2.455	3	0.484	Not Significant

Level of Significance: $\alpha = 0.05$

Results in Table 3 show that there was no statistically significant relationship between mothers' occupation and infant weaning practices among mothers attending PHC centres in Anambra State, χ^2 (3, N = 260) = 2.455, p = 0.484. Since the p-value is greater than 0.05, the null hypothesis was not rejected. This implies that mothers' occupation did not significantly influence their infant weaning practices.

Discussion of findings

What is the level of knowledge of infant weaning among mothers attending PHCs in Anambra State based on occupation?

The findings from the study showed that mothers that are civil servants (92.5%), trader (92.1%) and unemployed (89.1%) had very high level of knowledge of infant weaning while mothers that are farmers (71.3%) had high level of knowledge of infant weaning.

This shows that mothers that are gainfully employed have a very high level of knowledge unlike the unemployed and the farmers. Although all of them are

knowledgeable but the percentage varies among their occupation. This might be because working mothers have various sources of information on weaning which are gotten both within and outside the home. They can discuss infant weaning and its effects in the offices, engage themselves in media discussion, campaigns, workshop and program that can improve their level of knowledge of infant weaning unlike mothers in the farm or home doing house chores.

In concordance with the above findings, Awaf, Elias and Mahfouz (2023) found out from their study in Saudi Arabia that the working status and family income of the mother played a significant role in the knowledge scores (P< O.05). However, this is in contrast to the findings of Mustafa, Alamtairi, Alishahrani, Almostly, Almathami and Alsaley (2021) that reported a poor knowledge of infant weaning practices. Similarly, in agreement with this study, Boma, Atafo and Okari (2022) and Jones, Offiah and Wariboko (2023) in their study in Southern Nigeria reported that there was a significant association between the mothers occupation (P value = 0.003) with the level of weaning knowledge. Leelavathi (2019) and Sana, Muhammed Ayesha and Rabia (2022) also agreed that there is a significant association between occupation and knowledge of infant weaning. The convergence of the findings might be due to the fact that occupation or working outside home exposes one to more information from other sources other than the home. Other sources can be through television or radio in the offices, Jingles, campaigns, workshops, programs and health talks all outside home. Generally, the level of knowledge of infant weaning among mothers attending PHC in Anambra is very high based on occupation.

What is the proportion of mothers who practiced infant weaning in PHCs in Anambra State based on occupation?

The findings in the study showed that overall, irrespective of their occupation (Civil servant 56.3%, Trader 52.8%, farmers 60.8% and unemployed 54.6%) mothers had a moderate proportion of infant weaning practice. In this study the working class mothers did not have high proportion in the number of Mothers practicing weaning and this is contrary to the federal government of Nigeria policy that have increased the maternity for mothers to 6 months, hence, the working mothers will not have any excuse to give for commencing infant weaning earlier than 6 months thereby exposing these infants to mortality and morbidity.

In contrast to the findings of Awaf, Elias and Malfouz (2023) in their work at Saudi Arabia which recorded that working status and family income played a significant role, however, in their study overall 15.5% of the mothers never breast fed their children, 39.8% breast fed their infant for less than six months, 17.5% practiced breast feeding for 6 – 12 months while 27% breast fed for over 12 months. Also, this study is in agreement with Esan, Adegbilero-Iwari, Hussaini and Adetunji (2022) and Oluwaseyi, Tunraya, Omotala, .Bukola and Oghenerobor (2020) that showed fewer mothers who

practiced infant weaning in their study. Similarly, Rumucha and Gemede (2021) in their study disagreed with the findings of this study that showed occupation had a significant effects on mothers' complementary feeding practices.

The findings of the study is also dissimilar to that of Aina, Kio, Olajide, Ogunfowokan, Awoniyi and Nwaokocha (2017) in Ikeme local government area of Ogun state, Nigeria which also showed a statistically significant relationship between occupation and weaning practices among mothers.

Conclusion

The findings of this study suggest that maternal occupation is not a major determinant of infant weaning practices among mothers attending welfare clinics in Anambra State. Despite the generally high level of knowledge observed among the respondents, the translation of knowledge into optimal weaning practices remains suboptimal. This highlights the need for targeted health education and behaviour-change interventions that focus not only on increasing knowledge but also on promoting the consistent adoption of appropriate infant feeding practices among mothers.

References

Afolabi, K.A., Afolabi , A.O. Omishakin, M.Y.J. (2021). Complementary feeding and associated factors: Assessing Compliance with recommended guidelines among postpartum mothers in Nigeria. Population Medicine. **https://doi.org** / 10. 18332/ Ropmed/ 138939 (Accessed on 23/4/2024)

Ahmed, J.A., Sadeta, K.K. & Lembo, K.H. (2022). Complementary feeding practices and Household food insecurity status of children aged 6-23 months in Shashemene City West Arsi Zone, Oromia, Ethiopia. Hindawi Nursing Research and Practice. 20:22. https://doi.org/10.1155/2022/ 9387031.

Aina, F., Kio, J., Olajide, T.E., Ogunfowokan, O., Awoniyi, A.M. & Nweaokocha, C. (2017). Infant weaning knowledge and practice among mothers attending infant welfare clinic in three primary healthcare centres in Ikenne Local Government Area, Ogun State, Nigeria. International Journal of Applied Research Vol. 3 (12): 227-230. www.allresearchjournal.com.

Awaf. A. Elias, A & Mahfouz , M.S. (2023). Complementary feeding practices among mothers having children less than two years old attending well baby clinics in Jazan City, Saudi Arabia. Pan African Medical Journal. 45:45. Doi: 10. 11604/pamJ . 2023. 45. 45. 35451)

Boma, A.W., Aitafo, E.A. & Tamunoiyowuna, G. O. Knowledge and practice of weaning among mothers attending the paediatric out patient clinic in a tertiary

hospital in Southern Nigeria (2022). International journal of Advanced Community Medicine. Vol. 5(1): 13-21. https://doi.org/10. 33545 / comed. 2022 v5. ila. 220.

Esan, D.T., Adegbilero-Iwari, O.E., Hussaini, A. & Adetunji. A.J. (2022). Complementary Feeding Pattern and its determinants among mothers in selected primary health centres in the urban metropolis of Ekiti State, Nigeria. Scientific Reports. 12: 6252. http: // www.nature. com / articles / 541598 – 022 – 10308 – 7.

Jones, G.S. Offiah, R.M. & Wariboko, B.M. (2023). Knowledge and Practice of under two children weaning among mothers attending two primary health care centres in Port Harcourt Local Government Area of Rivers State. African journals of health applied science and management. 6: 2. https. www. ajol. Info>articles > view.

Leelavathi, A. (2019). A Descriptive study to Assess the level of knowledge regarding weaning among primipara mothers of infants. Journal of perinatal, paediatric and Neonatal Nursing.1 (2): 2581-9011. Doi.http://doi.org. /10.5281/ Zenodo. 3246687.

Manisha & Khan, S. (2021). Knowledge and practices of mothers on weaning food. International journal of creative research thoughts (IJCRT). 9(2):2320 – 2882. www.ijcrt. Org.

Ministry of Information (2021). Anambra State news and media websites http://m.facebook.com > ANS9mol. (Accessed on 14/5/2024)

Mustaga, A.E., Almutairi, K.H., Almujary, F.M., Alshahrani, N.A., Almobty, S.M., Almathami, W. A & Saleh, R.S. (2021). Awareness level of mothers Regarding Child weaning Practice in Aseer Region, Southern of Saudi Arabia. World Family Medicine / middle east Journal of family medicine. vol. 19 (3): 65-73. DOI: 10. 5742 / MEWFM. 2021. 94007.

Naah, A. M. T., Kyereme, A.K. & Adjei, J.A. (2019). Maternal challenges of exclusive bread feeding and complementary feeding in Ghana. https://doi.org/10.1371/journal.pone. 0215285 . (Accessed on 27/8/2025)

Rumucha, T.D. & Gemede, H.F. (2021) Complementary Feeding Knowledge, Practice, Dietary Diversity and Associated factors among mothers of children 6-23 months in Guto Gida District, Oromia, Eghopia. Journal of Nutrition & Food Sciences. vol 11 (7): 343.