

KNOWLEDGE AND UTILIZATION OF BREAST-MILK AS AN INFANT FEEDING OPTION AMONG HIV-INFECTED MOTHERS WITH WESTERN AND NON-WESTERN EDUCATIONAL BACKGROUND IN KANO METROPOLIS

BY

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ABSTRACT

The study investigated the knowledge and utilization of breast-milk as an infant feeding option among HIV-infected mothers with western and non-western educational backgrounds in Kano Metropolis with the view to preventing mother to child transmission of HIV. A self-developed questionnaire containing statements on knowledge and utilization of breast-milk was pilot tested and administered on 291 HIV-infected mothers attending Prevention of Mother to Child Transmission (PMTCT) clinic in AKTH, Kano using a purposive sampling technique. Demographic data collected for this study were analyzed using frequency counts and percentage. Inferential statistics of t-test at 0.05 level of significance was used to test the hypotheses. The results obtained showed significant differences in the knowledge ($t = 3.563, p < 0.050$) of breast-milk as an infant feeding option among HIV-infected mothers with western and non-western educational backgrounds. The result also revealed that significant differences did not exist in the utilization ($t = 0.989, p > 0.050$) of breast-milk as an infant feeding option among HIV-infected mothers with western and non-western educational backgrounds in Kano Metropolis. It was recommended among others that health personnel should intensify more enlightenment campaign on the knowledge in order to influence the utilization of breast-milk as an infant-feeding option among HIV-infected mothers in Kano Metropolis.

Key words: Knowledge, Utilization, Breast-milk, HIV-Infected mothers, Educational background

Introduction

Nigeria, with an estimated national HIV prevalence of 4.6 percent, has the third largest number of people living with HIV/AIDS (Acquired Immune Deficiency Syndrome) in the world and the highest number of HIV-infected adults in West Africa. At the current level of prevalence, it is estimated that 2.95 million people in Nigeria are currently infected with HIV (Federal Ministry of Health, (FMH) Abuja, 2009). Heterosexual transmission accounts for nearly 80 percent of all infections. About 10 percent of HIV infections are transmitted through Mother-to- Child Transmission (MTCT) while another 10 percent is transmitted by the use of unsterilized needles and surgical implements, infected blood and blood products (Setel, 2006).

According to World Health Organization (WHO) (2003), guidelines for infant feeding in the context of HIV recommend the avoidance of all breastfeeding in conditions where foods that can replace breast-milk are 'Acceptable, Feasible, Affordable, Sustainable & Safe' (AFASS). These conditions are often referred to as the AFASS conditions for replacement feeding. Otherwise, the WHO recommends exclusive breast-feeding up to 3–4 months of age. Thereafter, because the risk of HIV transmission may outweigh the protective benefits of breast-milk, mothers should quickly transit from breastfeeding to replacement feeding. In the HIV and infant feeding literature, this is commonly referred to as 'rapid weaning' (Ross & Lobbok, 2004).

Replacement feeding is the process of feeding a child who is not receiving any breast-milk with a diet that provides all the nutrients the child needs. If the AFASS criteria are not met, replacement feeding may present a greater risk to the infant's health than breastfeeding because breast-milk provides protection against infections other than HIV. Moreover, improperly prepared breast-milk substitutes may expose the infant to pathogens. In such cases, the UN agencies recommend exclusive breastfeeding during the first months of life. Other available infant feeding options in the context of HIV include cup feeding of expressed, heat-treated breast-milk, commercial infant formula, home-modified animal milk and wet nursing (WHO, 2005).

Knowledge is the awareness or familiarity gained by experience. Most of the HIV-infected mothers especially those that attend Prevention of Mother to Child Transmission (PMTCT) clinics have high knowledge of breast-milk as an infant feeding option. This is as a result of the various lectures that they are receiving at PMTCT Clinics. Although the level of awareness may differ depending on the level of education of the infected-mothers. Guidelines for infant-feeding options among HIVpositive mothers are changing with informative research. Cultural factors, socialization processes, gender dimensions, socio economic status and educational backgrounds of the infected mothers within communities should be considered in recommending feasible and sustainable options (Wachira et al., 2009).

Utilization means the level of uptake/practices of breast-milk as an infant feeding option among HIV-infected mothers. Breast-milk especially the exclusive breastfeeding is recommended in a poor resource settings except if the infected mothers can meet up with the AFASS conditions of replacement feeding. In Cote d'Ivoire where free formula was provided, 59 percent (151 of 255) of HIV-positive women planned to replacement feed before delivery and 81 percent (123 of 151) of those who so planned were doing so two days after birth (Leroy *et al.*, 2002).Lack of knowledge about exclusive breastfeeding in HIV-infected mothers may have hindered the practice of exclusive breastfeeding in some cases but not others. In Thailand, mothers considered breastfeeding more advantageous than formula for several reasons, but HIV-positive mothers rated formula significantly safer than other feeding methods (Talawatet al.,2002).

Statement of the Problem

Once a woman is pregnant and tested HIV-positive, the ideal is that she should avoid all breast-feeding and embark on replacement feeding to prevent further transmission of the virus to the baby but in the area under review, replacement feeding seem not to be affordable, sustainable and safe to most infected mothers and deaths from diarrhea and respiratory infections could far outnumber those from HIV. However, infected mothers need sufficient information on the relative risks and benefits of breast milk to enable them to make an informed choice and this could best be determined by their level of educational background. It is against this background that the study was conducted on knowledge and utilization of breast milk as an infant feeding option among HIV infected mothers with western and non-western educational background in Kano Metropolis.

Purpose of the Study

The purpose of this study was to investigate the knowledge and utilization of breast-milk as an infant-feeding option among HIV-infected mothers with western and non-western educational background in Kano Metropolis with the view to preventing mother to child transmission of HIV.

Research Hypotheses

The study seeks to test the following research hypotheses at 0.05 level of significance:

HO₁: There is no significant difference in the knowledge of breast-milk as an infant feeding option between HIV-infected mothers with western and non-western educational backgrounds in Kano Metropolis.

HO₂: There is no significant difference in the utilization of breast-milk as an infant feeding option between HIV-infected mothers with western and non-western educational backgrounds in Kano Metropolis.

Methodology

In this study, a descriptive survey design was used. The population of this study consisted of all the HIV-infected mothers attending PMTCT Clinic in Aminu Kano Teaching Hospital (AKTH), Kano. Purposive sampling technique was used for this study. This is because the respondents can only be found in the PMTCT Clinics and not somewhere else. Nworgu (2006) stated that in purposive sampling, specific elements which satisfy some pre-determined criteria are selected. Therefore, the sample size of 291 was drawn from the population using The Research Advisors (2006), table for determining sample size.

In collecting data for this study, self-developed questionnaire on the Knowledge and Utilization of Breast-Milk as an Infant-Feeding Option among the HIV-Infected Mothers with Western and Non-Western Educational Background in Kano Metropolis (KUBMIFOHIM-Q) which was based on four-points modified scale was used. The questionnaire was divided into sections A, B and C.

Section A: Sought information on demographic data of the respondents.

Section B: Sought information on Knowledge of Breast-Milk as an infant-feeding option. Section C: Sought information on Utilization of Breast-Milk as an infant-feeding option.

Through the nurses and physicians (research assistants) attending to the HIV infected mothers in the hospital, the questions were read and interpreted for the respondents in a manner that did not influence their responses. The questionnaires were left with the research assistants for the duration of two weeks and were administered to the respondents on the days of their clinics. Out of 291 questionnaire administered, only 274 were duly completed and returned for the analysis. Face and content validity of the questionnaire were done by experts in the area of Health Education. The instrument was subsequently tested for construct validity, with the research questions demonstrating high reliability with a Spearman Brown Prophecy, $r \geq 0.85$.

Ethical approval was taken and the participants were assured of no potential risks that might cause any harm to them. Information collected from participants was kept confidential. The demographic information of the participants was organized and described using frequency count and percentage while inferential statistics of t-test was used to test the hypotheses at 0.05 level of significance.

Results

The results of the study are presented in tables as indicated below:

Table 1: Demographic characteristics of the respondents

| Variable | Classification | Frequency | Percentage (%) |
|-------------------|----------------|-----------|----------------|
| Educational Level | Western | 152 | 55.5 |
| | Non-Western | 122 | 44.5 |
| Total | | 274 | 100 |

The table above revealed that 152 (55.5%) have western education. This could be primary, secondary and tertiary; while 122 (44.5%) have no western education. This could be that they attended Islamiyya or Qu'ranic School. This implied that the number of the respondents with western education were more than those without western education as at the time of this study.

Hypothesis 1: There is no significant difference in the knowledge of breast-milk as an infant-feeding option between HIV-infected mothers with western and non-western educational backgrounds in Kano Metropolis

Table 2:t-test on knowledge of breast-milk as an infant-feeding option between HIV-infected mothers with western and non-western educational backgrounds

| Variables: Knowledge | N | Mean | SD | df | t | Prob. |
|-----------------------|-----|-------|------|-----|-------|--------|
| Western Education | 152 | 36.31 | 2.36 | 272 | 3.563 | 0.0001 |
| Non-Western Education | 122 | 35.43 | 1.54 | | | |

t=3.563, df=272, (p < 0.050), Sig

From Table 2, it showed that 0.0001 is less than 0.050. Therefore, the null hypothesis which states that there is no significant difference in knowledge of breast-milk as an infant-feeding option between HIV-infected mothers with western and non-western educational backgrounds was rejected.

Hypotheses 2: There is no significant difference in the utilization of breast-milk as an infant-feeding option between HIV-infected mothers with western and non-western educational backgrounds in Kano Metropolis.

Table 3: t-test on utilization of breast-milk as an infant-feeding option between HIV-infected mothers with western and non-western educational backgrounds

| Variables: Utilization | N | Mean | SD | df | t | Prob. |
|------------------------|-----|-------|------|-----|-------|-------|
| Western Education | 152 | 23.60 | 1.93 | 272 | 0.989 | 0.324 |
| Non-Western Education | 122 | 23.90 | 3.23 | | | |

t = 0.989, df = 272, (p > 0.050), Not-sig

Table 3 showed that 0.324 is greater than 0.050 and as a result, the hypothesis was accepted. This implied that there is no significant difference in the utilization of breast-milk as an infant-feeding option between the HIV-infected mothers with western and non-western educational backgrounds in Kano Metropolis.

Discussion

The study investigated the knowledge and utilization of breast-milk as an infant-feeding option among HIV-infected mothers with western and non-western educational background in Kano Metropolis. The study revealed that a significant difference existed in the knowledge of breast-milk as an infant feeding option between HIV-infected mothers with Western and Non-Western education. The respondents with western education were more knowledgeable than their counterparts. This might be as a result of their exposure academically, ranging from primary, secondary and tertiary.

Also, outside the general lectures in PMTCT clinics, those with western education might have read from printed papers, bill boards, posters, hand-bills or listen to the radio, television and so on. Hence, have higher knowledge. The study gained the support of Bentley, Coutsoadis, Kagoro & Newell (2002) who worked on Breastfeeding Promotion and Infant Feeding Practices in South African Women Living in an Area of high Prevalence, who concluded that knowledge of breast-milk was high in a programme group in South Africa that included trained lay counseling in clinics and home visits and general community breastfeeding promotion with posters, pamphlets and newspaper articles.

The study also revealed that no significant differences existed in the utilization of breast milk as an infant feeding option between HIV-infected mothers with Western and Non-Western educational backgrounds in Kano Metropolis. The two groups were not utilizing the breast-milk option. This could be as a result of the fear of transmitting the HIV to their babies. This study is in contrast with the findings of Isiramen (2002) that mothers with more education were more likely to practice exclusive breastfeeding.

Conclusions

On the basis of the results, the following conclusions were drawn that:

1. Significant differences existed in the knowledge of breast-milk as an infant feeding option between HIV-infected mothers with western and non-western educational backgrounds in Kano Metropolis.
2. Significant differences did not exist in the utilization of breast-milk as an infant feeding option between HIV-infected mothers with western and non-western educational backgrounds in Kano Metropolis.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Health personnel should intensify more enlightenment campaign on the knowledge in order to influence the utilization of breast-milk as an infant-feeding option among HIV-infected mothers in Kano Metropolis.
2. Breast-milk option especially exclusive breastfeeding should be encouraged especially in the first six months of the baby's life to reduce morbidity and mortality in Kano Metropolis.

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