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FACTORS INFLUENCING INFANT FEEDING OPTION AMONG HIV POSITIVE MOTHERS ATTENDING ST PATRICK'S HOSPITAL (MILE FOUR) ABAKALIKI, EBONYI STATE**Afam Ndu**

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Abstract

This study examined the factors influencing infant feeding options among HIV-positive mothers attending St. Patrick's Hospital Mile 4, Abakaliki, Ebonyi State. The study was guided by three specific objectives focusing on socio-economic, maternal, and infant-related factors affecting infant feeding choices. A descriptive survey design was adopted, and a sample of 138 HIV-positive mothers was selected from a population of 211 using the Taro Yamane formula. Convenience sampling technique was used. Data were collected using a researcher-structured questionnaire with four sections and analyzed using simple percentage distribution. Findings showed that socio-economic conditions strongly influenced infant feeding choices. Although most respondents had access to clean drinking water, many lacked storage facilities, considered baby formula expensive, and reported insufficient money to meet basic feeding needs. Maternal factors also played a role, as many respondents stated that they make decisions about their baby's feeding method, while some indicated that their health condition affected feeding. Infant-related factors were less common but still relevant, especially in cases involving refusal to breastfeed or health conditions that made sucking difficult. The study concluded that infant feeding options among HIV-positive mothers are shaped by a combination of economic constraints, maternal health and decision-making, and infant conditions. It recommended improved counseling, economic support, and stronger infant-feeding guidance for HIV-positive mothers to promote safer and more appropriate feeding practices.

Keywords: *HIV-positive mothers, infant feeding, socio-economic factors, maternal factors, infant factors, Abakaliki.*

Introduction

The global fight against HIV/AIDS has seen significant progress over the past few decades, particularly in the area of preventing mother-to-child transmission (PMTCT). However, despite the availability of effective interventions, transmission of HIV from mother to child during pregnancy, delivery, or breastfeeding continues

to pose a public health challenge—especially in low- and middle-income countries. Among the various transmission routes, breastfeeding remains a critical concern due to its potential to transmit the virus to the infant if not managed properly (WHO, 2023).

Infant feeding is a central component of PMTCT programs. The World Health Organization (WHO) recommends that HIV-positive mothers in resource-limited settings should practice exclusive breastfeeding for the first six months of life, while they or their infants are receiving antiretroviral therapy. This approach has been shown to significantly reduce the risk of HIV transmission through breast milk, while still ensuring the child receives optimal nutrition and immune protection (WHO, 2023). On the other hand, exclusive replacement feeding (formula feeding) is advised only when it meets the AFASS criteria—acceptable, feasible, affordable, sustainable, and safe.

Despite these guidelines, the decision-making process surrounding infant feeding among HIV-positive mothers is often complex and influenced by multiple interrelated factors. These may include the mother's level of education, awareness of HIV transmission risks, socio-economic status, cultural beliefs, family and community support, stigma and discrimination, availability of healthcare services, and the quality of counseling provided by healthcare workers. In many African communities, breastfeeding is a strong cultural norm, and deviation from this norm—such as using formula—may raise suspicion and lead to stigma, potentially discouraging mothers from making the safest choice for themselves and their babies (Usman & Bukola, 2024).

In Nigeria, where the prevalence of HIV remains significant and health system challenges persist, there is a need to better understand the social and individual dynamics that shape the feeding choices of HIV-positive mothers. In Ebonyi State, St. Patrick's Hospital (Mile Four) in Abakaliki is one of the leading health institutions offering comprehensive PMTCT services. However, despite the hospital's efforts in providing counseling and support, anecdotal evidence suggests that many mothers still struggle with their infant feeding decisions. A detailed investigation into the factors influencing these choices is therefore necessary to improve service delivery and enhance PMTCT outcomes. By identifying the key determinants—whether they are economic, social, psychological, or systemic—this study aims to provide evidence that will inform policy and strengthen support systems for HIV-positive mothers. Ultimately, the goal is to ensure that infants born to HIV-positive mothers have the best possible chance at a healthy, HIV-free life (Okafor et al., 2023).

Statement of Problem

In Nigeria, Oni et al. (2022) found that many HIV-positive mothers were unaware of the full range of feeding options available and were often influenced by misinformation, community norms, and financial limitations. The problem identified in this local study is the persistent gap between knowledge and practice among HIV-positive mothers in relation to infant feeding options. Although HIV-positive mothers are provided with medical guidance, many face socio-cultural and economic barriers that affect their ability to follow best practices.

In Ebonyi State specifically, there is a notable gap in research addressing the factors that influence infant feeding practices among HIV-positive mothers. Despite national recommendations for exclusive breastfeeding or formula feeding, HIV-positive mothers in the region continue to struggle with making informed feeding choices, potentially increasing the risk of HIV transmission to their infants.

This issue remains underexplored, with little data available on the specific factors influencing feeding decisions. The researcher intends to assess these factors to identify the key determinants influencing infant feeding options among HIV-positive mothers at St. Patrick's Hospital (Mile Four), Abakaliki, Ebonyi State. Understanding these influences will help inform targeted interventions to improve infant feeding practices and reduce the risk of HIV transmission in the region.

Objective of the Study

The broad objectives of this study is to investigate factors influencing the choice of infant feeding option among HIV positive mothers in St Patrick's Hospital, Abakaliki, Ebonyi state.

The specific objective are to:

1. Assess socio-economic factors influencing the choices of infant feeding options among HIV positive mothers in St Patrick's Hospital Abakaliki.
2. Identify maternal factors influencing the choice of infant feeding options among HIV positive mothers in St Patrick's Hospital Abakaliki.
3. Identify infant factors that can influence choices of infant feeding option among HIV positive mother in St Patrick's Hospital Abakaliki.

Research Questions

The questions formulated are to guide the study

1. What are the socio-economic factors influencing the choices of infant feeding option Among HIV mothers in St Patrick's Hospital Abakaliki?
2. What are the maternal factors influencing the choices of infant feeding options in St Patrick's Hospital Abakaliki?
3. What are the infant factors influence choice of infant feeding options in St Patrick's Hospital Abakaliki?

Significance of the Study

This research will be useful in so many ways to different people and other related fields.

To the nurses, medical doctors and other health care givers, the outcome of this research will inform policy recommendations on the choices of infant feeding options among HIV positive mothers and how they can advice policies and practice. Nurses, doctors, and other healthcare providers can use the study's findings to advise HIV-positive mothers on the safest and most effective infant feeding options. The study's results can inform policy recommendations on infant feeding options, helping healthcare providers develop guidelines and protocols for caring for HIV-positive mothers and their infants. Policy makers can use the study's findings to make informed decisions about infant feeding policies and programs for HIV-positive mothers. The study's results can help policy makers allocate resources effectively, ensuring that HIV-positive mothers and their infants receive the best possible care.

The study's findings can empower HIV-positive mothers to make informed decisions about infant feeding options, reducing anxiety and uncertainty. By choosing the safest and most effective infant feeding option, HIV-positive mothers can reduce the risk of HIV transmission to their infants and promote healthy growth and development. The study's findings can provide a foundation for future research on infant feeding options for HIV-positive mothers, helping to address remaining knowledge gaps and improve health outcomes. To health care providers in the voluntary counseling sessions and other stand alone facilities and support groups, the outcome of this research will be a useful guide and reference materials during their counseling sessions and support group activities. To HIV positive mothers, it will service as a guide to choices of infant feeding options. To other researchers in this field and other related fields, the outcome of this research will serve as a guide during intervention project design and planning.

Scope of the Study:

The scope of this study is to determine the factor influencing the child of infant feeding options among HIV positive mothers. This study is delimited to HIV positive mothers within the one health facility studied which is in St Patrick's Hospital, Abakaliki, Ebonyi state.

Literature Review

Theoretical Framework

The theory used in this study is the Health Belief Model (HBM). The Health Belief Model (HBM) is a psychological model that explains and predicts health behaviors by focusing on the attitudes and beliefs of individuals. The health Belief theory was propounded in 1970's by Rosenstock and it is known as a model with components that interact and explain health behavior. The model is based on the understanding that a person's decision to engage in a health-related behavior depends on their perception of several key components.

Components of health belief model

Mariner and raise (2019) outline the composition health Belief Model to include the following ;

- Perceived Susceptibility

- Perceived severity
- Perceived Benefits
- Perceived Barriers
- Cues to actions
- Self efficacy

Application to the study

1. Perceived Susceptibility - This refers to the mother's perception of the risk of transmitting HIV to her infant through various feeding methods. Mothers who perceive a high risk of HIV transmission through breastfeeding may opt for replacement feeding if feasible.

If the mother believes exclusive breastfeeding (EBF) reduces the risk more than mixed feeding, she may choose EBF over other options. HIV-positive mothers attending St. Patrick's Hospital may perceive themselves as being at a higher risk of transmitting HIV to their infant during breastfeeding. This belief will significantly influence their decision-making on whether to exclusively breastfeed, formula feed, or adopt any alternative feeding strategies.

2. Perceived Severity

This is the mother's belief about the seriousness of the consequences of HIV transmission to the infant. A mother who perceives HIV transmission as a fatal or life-altering consequence may be more motivated to follow strict feeding guidelines. The fear of infant mortality or lifelong illness can influence strict adherence to recommended feeding options.

Influencing Factors:

- Personal or family experiences with HIV/AIDS
- Cultural beliefs about illness and child survival
- Health education from health care workers

Mothers may perceive the potential consequences of transmitting HIV to their infant as severe, which could affect their decision-making in choosing an infant feeding option. The perceived severity will depend on their understanding of the health outcomes for both the mother and the infant.

3. Perceived Benefits - This refers to the mother's belief in the efficacy of the advised feeding method (e.g., EBF or formula feeding) in reducing the risk of HIV transmission. If mothers believe exclusive breastfeeding for six months with antiretroviral therapy (ART) significantly reduces transmission risk, they may be more likely to adopt it. Mothers may also perceive replacement feeding as safer but only if they believe it is affordable, feasible, acceptable, sustainable, and safe (AFASS).

4. Perceived Barriers

These are perceived obstacles to adopting the recommended infant feeding options.

- Economic constraints: Formula feeding may not be affordable.
- Social and cultural pressures: Family members may not support exclusive breastfeeding.
- Stigma: Formula feeding might reveal HIV status to others.

Barriers might include economic constraints (affording formula), social stigma (fear of being judged for not breastfeeding), lack of support, or misinformation about infant feeding options. These barriers could influence a mother's ability to make the best feeding decision for her infant.

5. Cues to Action

These are factors that prompt decision-making or behavioral change regarding infant feeding. Healthcare worker advice, support groups, posters, or reminder messages from the hospital may prompt correct feeding choices. Peer experiences shared during antenatal/postnatal visits may also trigger behavior change.

6. Self-Efficacy

This is the mother's confidence in her ability to implement the chosen feeding method correctly and consistently. A mother who feels confident in her ability to adhere to exclusive breastfeeding or safely prepare formula is more likely to choose and maintain that method. Mothers' confidence in their ability to implement safe feeding practices plays a critical role in their decision-making. If they lack self-efficacy, they might feel overwhelmed or incapable of following the recommended guidelines.

Using the Health Belief Model to study factors influencing infant feeding choices among HIV positive mothers provides a structured lens to examine individual, social, and systemic factors. Understanding these components helps health practitioners and policymakers design effective interventions tailored to the mothers' needs and perceptions, especially in resource-limited settings like St. Patrick's Hospital, Abakaliki, Ebonyi State.

Empirical Review

Globally, infant feeding options for HIV-positive mothers have been a major focus in efforts to prevent mother-to-child transmission of HIV (PMTCT). A study by Coovadia et al. (2023) in South Africa revealed that mixed feeding practices, which combine both breast milk and infant formula, increase the risk of HIV transmission to infants. This study emphasized the need for clear guidelines and counseling on the safest feeding options, advocating for exclusive breastfeeding or formula feeding as better alternatives to mixed feeding. Similarly, World Health Organization (WHO, 2016) guidelines recommend exclusive breastfeeding for HIV-positive mothers who are on antiretroviral therapy (ART), as it significantly reduces the transmission risk compared to mixed or no breastfeeding.

A study conducted by Mushavi et al. (2023) in Zimbabwe found that despite availability of antiretroviral drugs and breastfeeding counseling, socio-economic factors and cultural beliefs were major obstacles for HIV-positive mothers in adhering to recommended feeding practices. These findings indicated that maternal education, financial constraints, and community stigma played a significant role in feeding decisions, often leading to suboptimal choices.

The socio-economic status of HIV-positive mothers significantly impacts their choices regarding infant feeding. Key socio-economic factors such as income, education level, employment, and fear of stigma shape the decision-making process. Heck et al. (2020) analyzed a stratified random sample of over 10,000 women in California to investigate the impact of socioeconomic status on breastfeeding among HIV-positive mothers. Logistic regression revealed a strong association between higher socioeconomic indicators—such as income, education, and occupation—and a greater likelihood of breastfeeding. The study concluded that both maternal and paternal education are critical determinants, and emphasized the need for social policies that promote educational access.

Income and Employment Status: Research indicates that higher socio-economic status is positively associated with exclusive breastfeeding (EBF). HIV-positive mothers with higher incomes are more likely to choose safe feeding practices, including exclusive breastfeeding, due to greater access to resources such as infant formula, healthcare, and feeding counseling. For instance, a study conducted in Southwestern Nigeria involving 600 HIV-positive mothers found that higher monthly income and receiving proper counseling were strongly linked to EBF practices. The study revealed that mothers with higher monthly incomes were twice as likely to practice exclusive breastfeeding (AOR = 2.6), as they could afford adequate nutrition for themselves and their infants, reducing the temptation to rely on formula feeding (Fagbamigbe et al., 2022).

Education: Education is another crucial factor. Educated mothers are more likely to make informed choices about infant feeding and understand the importance of EBF in preventing mother-to-child transmission of HIV. In a study conducted in Port Harcourt, Rivers State, education and awareness programs were found to positively influence the choice of feeding method among HIV-positive mothers. Mothers with higher education levels were more inclined to exclusively breastfeed as they had better access to information regarding the transmission of HIV and the role of breastfeeding in preventing transmission (Oluwaseun et al., 2021). Bloom, Golgobloom, and Stevens (2023), using purposive sampling and semi-structured interviews, also found that mothers who breastfed were generally older, more educated, and more likely to have made their feeding decisions early with

professional or spousal support. These findings reinforce the impact of socioeconomic and informational access in shaping feeding choices.

Fear of Stigmatization: One of the most significant socio-economic factors that can deter mothers from choosing breastfeeding is the fear of stigmatization. In regions where HIV-related stigma is high, mothers may opt for formula feeding or mixed feeding to conceal their HIV status. The study by Fagbamigbe et al. (2022) found that HIV-positive mothers who feared stigma were more likely to avoid breastfeeding, as they feared their HIV status would be revealed. This factor is crucial in low-resource settings where public awareness and HIV education are limited. Maru and Haidar (2020) provided comparative insights from developed and developing countries. Their findings showed that although formula feeding is safer in developed settings, in resource-limited settings, exclusive breastfeeding was more prevalent due to socioeconomic and infrastructural constraints. Their study highlighted predictors of safer feeding choices such as education, income, HIV disclosure, and maternal knowledge. Maternal factors, including the mother's age, education, marital status, HIV status disclosure, and previous experiences with infant feeding, significantly influence the feeding choices.

Age and Parity: The age of the mother plays a significant role in determining infant feeding choices. Older mothers tend to be more experienced and have a higher likelihood of adopting recommended feeding practices, as they may have more access to healthcare and better nutritional knowledge. Conversely, younger mothers might face more challenges in feeding their infants properly, especially when it comes to breastfeeding. For example, in a study conducted in Enugu, Nigeria, younger HIV-positive mothers were found to be less likely to exclusively breastfeed their infants, potentially due to concerns about milk production and HIV transmission risks (Okafor et al., 2018).

Marital Status and HIV Status Disclosure: Marital status and disclosure of HIV status to a partner also play crucial roles in influencing feeding choices. Mothers who disclosed their HIV status to their spouses were more likely to receive support for exclusive breastfeeding. In contrast, non-disclosure often led to confusion and conflicting advice, making it harder for the mother to make informed feeding choices. Research conducted in South-East Nigeria indicated that HIV-positive mothers who received full support from their spouses and family members were more likely to engage in exclusive breastfeeding. The emotional support from partners helped reduce anxiety around HIV transmission and increased the likelihood of practicing safe feeding methods (Eze et al., 2022).

Previous Experiences and Knowledge: A mother's previous experience with infant feeding also influences her decision. Mothers who had prior knowledge of the benefits of breastfeeding were more likely to continue breastfeeding, even when they were HIV-positive. In contrast, mothers with less knowledge or previous experience with breastfeeding may be more likely to adopt alternative feeding methods, such as formula feeding, due to lack of confidence in their ability to breastfeed successfully. Infant-related factors also have a significant impact on the feeding choices made by HIV-positive mothers. These factors include the infant's health status, birth weight, perceived feeding needs, and family pressure.

Infant Illness: Infant health is one of the primary factors influencing feeding decisions. In some cases, HIV-positive mothers perceive that their infants are not thriving or may be suffering from a health issue, prompting them to introduce supplementary feeding, such as formula or solids, earlier than recommended. In a study in Southwestern Nigeria, mothers who believed that their infants were sick or had low birth weight were more likely to introduce formula or mixed feeding. This is a common misconception, as exclusive breastfeeding is often enough to meet an infant's nutritional needs, even in cases of illness (Ajayi et al., 2023).

Perceived Insufficient Breast Milk: A common concern among HIV-positive mothers is the fear of insufficient breast milk. This perception often leads to mixed feeding, where breast milk is supplemented with formula or other foods. A study conducted in Jos, Nigeria, found that mothers who perceived their milk supply as inadequate were more likely to introduce complementary foods or formula feeding. The perception of insufficient milk often leads to the early introduction of non-breast milk options, especially when mothers feel pressured to provide for the infant's nutritional needs (Nnaji et al., 2020).

Family Pressure and Cultural Expectations: Family expectations and cultural norms also heavily influence feeding decisions. In some Nigerian communities, there is significant pressure from family members, particularly elders, to feed infants solid foods or to use formula feeding. This pressure can conflict with recommended breastfeeding practices. Studies show that mothers often face pressure from relatives to introduce solid foods as early as four months, which contradicts the advice of exclusive breastfeeding for the first six months.

Research Method

Design

Descriptive survey design is adopted for this study, the research design approach present- oriented and based on on-going event as it provides a detailed description of existing factors influencing infant feeding options of HIV positive mothers. The survey design is considered appropriate for this study because it allowed description of the phenomenon as they exist in their natural setting at a time of the research.

Setting the Study

This study will be carried out in Mile 4 Hospital Abakaliki, Ebonyi State. This institution is also known as St. Patrick Hospital Mile 4, established by a missionary body (Roman Catholic Church) in the year 1946 The health institution is a maternity Hospital for attending to pregnant mothers and children, with another extension further away from the hospital vicinity for treating patients with tuberculosis and leprosy which was the sole aim of establishing the hospital before any other thing was brought to mind. The Hospital has many structures and facilities in the hospital vicinity with a convent as one of its structures. It is located in Enugu-Abakaliki Road Azuiyi Udene, Isieke, Nigeria. Mile 4 Hospital being under ohatekwe community Isieke in Ebonyi Local Government Area in Ebonyi State.

Target Population

The population of this study comprises 211 HIV positive mothers who are Currently attending antenatal, postnatal, or pediatric clinics at St. Patrick's Hospital Abakaliki, Ebonyi State.

Sample size/ Determination

Using Taro Yamane Formula

$$n = N/1+N(e)^2$$

Substitute the values

$$n = 211/1+ 211(0.05)^2 = 211/1+211(0.0025)$$

$$n = 211/1+0.5275 = 211/1.0.527$$

$$n = 138.131$$

$$n = 138$$

The sample size used for this study was 138 registered HIV positive mothers in mile 4 hospital, Ebonyi State.

Sample Technique

Convenience sampling techniques was used for the study whereby, the researcher utilizes those elements in the population that happen to be around at the time of data collection and were willing to participate in the study.

Instrument for Data Collection

A self-structured questionnaire was developed by the researcher after the review of related relevant literature. The questionnaire was in four sections, A,B,C and D. Section A is designed to elicit social demographic characteristics of the respondents while section B,C and D were designed to elicit the factors influencing infant feeding option among HIV positive mothers attending St. Patrick's Hospital Mile Four Abakaliki, Ebonyi State based on the objectives of the study. The questions were made simple for the understanding of the respondent and available options were made where necessary.

Validity and Reliability of the Instrument

Questionnaires was formulated by the researcher and copies of it were submitted to the supervisor who assessed, made corrections and confirmed it validity per face and content. Equally, the validity was ascertained by giving the questionnaire to two nurses on research. Their corrections were affected and their inputs taken in conjunction with that of the supervisor. Then, the supervisor approved the questionnaire for type-setting and usage. The consistency of the instrument (reliability) was established by a test-retest measure of 10% registered

HIV mothers attending mater misericordiae. They were given 10 copies of the questionnaire (one copy each) and their responses were noted. Two weeks later, 10 copies of the questionnaire were given to same respondents, (one each) and their responses were elicited. The result was collated and tested for reliability using persons' products moment correlation coefficient. The reliability of the instrument was 0.86 which according to Iwuji (2012) is reliable.

Method of Data Collection and Analysis

An application letter from the researcher was submitted to the Matron in-charge of infant welfare clinic Mile Four Hospital with a letter of introduction from the Head of Department, nursing science of Tansian University oba which was duly signed. More so, oral consent was gained from the HIV positive women attending infant welfare clinic. The researcher equally clarified the purpose of the study and gave directions on how to answer the questions which helped in gathering accurate information. Hence 10 copies of the questionnaire were administered to the respondents which were made anonymous to retain respondents' confidentiality. The researcher supervised the filling of the questionnaires, after which they were retrieved on the spot of administration. All questionnaires were retrieved given a 100% retrieval rate. The data collection exercise took the researcher one day. The researcher analyzed data using the simple percentage while results of analysis were presented in tables below.

Ethical Consideration

An approval letter was obtained Head Research Ethics Committee Mile Four Hospital to conduct the research work and an undertaken was written by the researcher ensuring that all information from the women must be only for academic purpose. Verbal consent was obtained from the research respondents who were made to understand the reason and purpose of the research (for academic purpose only) and agreed to participate by giving their free choice for the study. The following were observed:

- The respondents were told not to fill their names and addresses on the questionnaire.
- The respondents' opinions were kept in confidence and were not used against them or for any other purpose other than for academic purpose.
- The respondents' consent were gained through giving them adequate information in order for them to express their feelings. Their acceptance to participate in the research was used as consent.
- The respondents were told that their participation in the study is optional and not compulsory. Also that they retain the right to withdraw from the study any time without duress.

Results

In this chapter, descriptive statistics was used to analyse the data generated from the study using the structure questionnaire. The chapter presents the findings of the study and results are hereby presented according to the research questions in the table as follows:

Section A: Socio-Demographic Data of the respondents.

Table 1: Showing demographic data characteristics of respondents'. n-138

1. Age Range (years)	Frequency	Percentage (%)
15-25 years	35	25.4%
26-35 years	87	63%
36-45 years	14	10.1%
45 above	2	1.5%
Total	138	100%
2. Marital Status		
Married	103	75.6%

Widow	7	5.1
Single	28	20.3%
Total	138	100%
3. Religion		
Christian	127	92%
Muslim	8	5.8%
Traditionalist	3	2.2%
Total	138	100%
4. Level of Educational		
Primary school	41	29.7%
Secondary school	69	50%
Tertiary institution	28	20.3%
Total	138	100%
5. Occupation		
House wife	30	21.7%
Farmer	34	24.6%
Civil servant	11	8%
Trader	51	37%
Total	138	100%

Table 1 above reveal that majority of the respondents 87(63%) were within the age of 26-35years, 35(25.4%) were within 26-35yrs, 14(10.1%) were in the age range of 36-45yrs while 2(1.5%) respondents (least) were above 45 years of age. The table above also shows respondent level of education, 41(29.7%) had primary education, 69(50%) had secondary education while 28(20.3%) has tertiary education. From the table above 28(20.3%) were single, 103 (74.6%) were married while 7(5.1%) were widows. The table showed frequency distribution of respondents religion. From the table 127(92%) were Christians, 8(5.8%) were Muslim and 3(2.2%) were traditionalist. Also, the result revealed that majority of the respondents 69(50%) attended secondary school, 41(29.7%) attended primary school while 28(20.3%) respondents (least) attended tertiary institution. The table also indicated occupation of respondent, from the table 34(24.6%) were farmers, 51(37%) respondents (majority) were traders, 30(21.7%) were housewife while 11(8%) respondents (least) were civil servants.

Section B: What are the socio-economic factors influencing the choices of infant feeding option Amon HIV mothers in St Patrick's Hospital?

To answer this question, four items in the instrument were used. These items were compared on the basis of their response options (yes or no) and the choices of infant feeding option.

Table 2: Percentage responses on socio-economic factors influencing the choices of infant feeding option.
n = 138

s/n	Items		Respon	Frequency	Percentage (%)
		e			
6	Do you have access to clean drinking water for infant	Yes		100	72.46
		No		38	27.53
		Total		138	100%
7	Do you have access to storage facilities like fridge	Yes		66	47.8
		No		72	52.2
		Total		138	100%
8	Do buying baby's formula expensive for you	Yes		109	79
		No		29	21
		Total		138	100%
9	Do you have money to buy baby's basic feeding needs	Yes		16	11.6
		No		122	88.4
		Total		138	100%

Table 2 above revealed that majority of the respondents 100(72.46%) had access to clean drinking water for infant while 36(27.53%) respondents (least) do not. The result also indicated that majority of the respondent 72(52.2%) do not have access to storage facilities like fridge while 66(47.8%) respondents (least) had access storage facilities like fridge. 109(79%) respondents (majority) said buying baby's formula were expensive while 29(21%) respondents (least) said it was not. The indicated that majority of the respondent 122(88.4%) do not have money to buy baby's basic feeding needs while 16(11.6%) respondents (least) said they had.

Section C: What are the maternal factors that influence the choices of infant feeding options in St Patrick's Hospital?

To answer this question, three items in the questionnaire were used, with yes or no response options. Each of these items was compared with the respondents' infant feeding options.

Table 3: showing percentage responses on maternal factors that influence the choices of infant feeding options

s/n	Items		Respon	Frequency	Percentage (%)
		e			
10	Do you take decisions for your baby's feeding method	Yes		92	66.7
		No		46	33.3
		Total		138	100%
11	Does your health condition affect	Yes		72	52.2
		No		66	47.8

	baby's feeding			
		Total	138	100%
12	Do you have limited time to breastfeed your baby because of work	Yes	29	21
		No	109	79
		Total	138	100%
13	Does the size of your nipple affect baby feeding well	Yes	16	11.6
		No	122	88.4
		Total	138	100%

In table 2 above reveals frequency distribution of respondents option on maternal factor influencing the choice of infant feeding options among HIV positive mothers. From the table above. It is indicated that majority of the respondent 92 (66.7%) take decision for their baby feeding method while 46 (33.3%) do not. It show that 72(52.2%) respondent (majority) said health condition affect baby feeding while 66(47.8%) respondent (least) said it does not. Majority of the respondent 109(79%) do not have limit time to breast feed their baby because of work while 29 (21% 6) do have limit time to breast feed their baby because of work. It also shows that majority of respondent 122 (88.4%) size of nipple do not affect baby breast feeding well while 16(11.6%) of respondent size of nipple affect breast feeding their baby.

Section D: What are the infant factors that influence the choice of infant feeding options in St Patrick's Hospital?

Table 4: Showing percentage responses on infant factors that influence the choice of infant feeding options

s/n	Items	Respon	Frequency	Percentage (%)
		e		
14	Do you have a baby with deformed lip, the baby cannot suck	Yes	8	5.8
		No	130	94.2
		Total	138	100%
15	Do your baby refuse to take breast milk	Yes	18	13
		No	120	87
		Total	138	100%
16	Do your baby health condition allow him suck breast	Yes	6	4.3
		No	123	95.7
		Total	138	100%

Table 4 above showed that majority of respondent 130(94.2%) identified that their baby deformed lip does not affect their baby from sucking while 8(5.8%) of the respondent (least) indicated that their baby deformed lip affect baby sucking. It show that majority of the respondents 120(87%) said their baby take breast milk while 18(13%) of the respondent (least) said baby refuse to take breast milk. Majority of the respondent 132(95.7%)

baby health condition affect baby sucking breast milk while 6(4.3%) baby health condition does not affect baby sucking breast milk.

Discussion of findings

The findings of this study showed that marital status and religious status influenced infant feeding options. It is not a surprised observation because it is a general opinion in the society that once a woman is married, she dances to marital tunes. Again today, people rely so much on their religious beliefs. These findings However, disagree with that of Maru and Haider (2013) where household cost, spousal disclosure and educational qualification influenced safer choices of infant feeding options. Bloom et al (2014) concluded that socio-demographic factors are active determiners of the choice of infant feeding option among HIV positive mothers.

Findings from the study indicated that only maternal health condition 72(52.2%) and time to breastfeed baby 29 (21%) are factors influencing infant feeding options amongst other maternal factors. The above findings agreed with Okon (2014) and Laar and Laar (2013) who held that it is worthy of note that women with certain health conditions/problems like hepatitis HIV and STI's are likely to pass on to their infants, hence may change their infant feeding options.

Findings indicated that in infant factors influencing their feeding options, only baby's refusal to take breast milk 18(13%) significantly influenced mothers' choice of infant feeding options. Hoat, Huong and Xuan (2014) observed that prematurity in infant results in low birth weight, which can influence the choice of HIV positive mother's feeding options. Eneji et al (2016) in their study shows that some infant factors like babies' health condition significantly influenced HIV positive mother's choice of infant feeding option.

Implications to Nursing

HIV/AIDS has become a global scourge Leading to millions of death worldwide. Individuals, governments and non governmental organizations have been battling with it in attempt to control, reduce and possibly eliminate this pandemic.

Therefore, this is need for the nurses to educate the mothers both positive and negative on measures to know their status and that of their children. The nurses should also educate them on their infant feeding options to promote their wellbeing.

Limitation of the study

This study is limited to ST Patrick's Hospital Abakaliki, Ebonyi State, Nigeria. Furthermore, it was a little difficult to gain co-operation from few respondents, as they wanted to be gratified with gifts, food and money after responding to the questions. The researcher also encountered language interpretations and shortage of time in carrying out the research.

Summary

This study x-rayed factor influencing the choices of infant feeding options among HIV positive mothers in ST Patrick's Hospital Abakaliki, Ebonyi State, Nigeria. The objectives were; To find out the socio-demographic factors influencing the choice of infant feeding option among HIV positive mothers, to determine maternal factors influencing the choice of infant feeding options among HIV positive mothers, to identify infant factors influencing the choice of infant feeding options among HIV positive mothers and to identity health system factors that can influence the choice of infant feeding options among HIV positive mothers. Relevant literatures were reviewed to cover the objectives of the study. The research design was descriptive survey design approach which is present oriented and based an on-going event. There was no sampling technique as the study population was small. A total population of one hundred and thirty eight was involved in the study a validated questionnaire structured by the researcher with the help of experts was used to collect data obtained were analyzed using the simple percentage while results of analysis were presented in Tables.

Major findings of the study revealed that; Marital and religious statuses are factors that had influence on the choice of infant feeding options among HIV positive mothers, Maternal health condition and limited time to

breast feed baby can influence the choice of infant feeding options among HIV positive mothers. Baby's refusal to take breast milk can influence the choice of infant feeding options. Health system factor were identified as less important factor that can influence infant feeding options among HIV positive mothers in Abakaliki Ebonyi State, Nigeria.

Conclusion

Based on the findings of this study, the following conclusions were made, that HIV positive nursing mothers attending health facilities in St Patrick's Hospital Abakaliki, Ebonyi State identified factors influencing the choice of infant feeding options as marital status, religious status, maternal health and baby's refusal to take breast milk. That the issue of choosing infant feeding options do not solely depend on one single factor, rather it involves the combination and interaction of other factors.

Recommendations

Based on the findings, the discussion and implications drawn from this study, the following recommendations were made:

- HIV positive mothers should be sensitized by HIV/PMTCT counselors so that they will be equipped with necessary knowledge to enable them identifies proper infant feeding options.
- The Federal Ministry of Health should make available the guidelines for PMTCT with particular reference to infant feeding for Nigerians, as this will help reduce the confusion on what infant feeding options to adopt by HIV positive mothers.
- NGOs in collaboration with government should organize radio, television. newspaper programme that will educate the populace on PMTCT and infant feeding options.

HIV positive mothers should be desensitized from this urge of stigmatization and gratification. There is need for seminars, workshops and outreach programme to be periodically and implemented in order to equip these workers towards utilizing their inner potentials and be made to understand that there is more to life even with HIV infection.

Suggestion for further studies

The following studies were suggested:

- Factors that influence Infant feeding option among HIV positive mothers attending Mater Misericordiae Hospital Afikpo, Ebonyi State
- Mother and child education on HIV in Ebonyi state
- Attitude and practice of infant feeding options among HIV positive mothers in General Hospital Iboko,

References

- Brown, A., & Shenker, N. (2021). Experiences of breastfeeding during COVID-19: Lessons for future emergency responses. *Maternal & Child Nutrition*, 17(1), e13088.
- Deoni, S. C., et al. (2023). Long-term cognitive benefits of complex milk lipids in infant formula. *ScienceDaily*. <https://www.sciencedaily.com/releases/2023/08/230831142823.htm>
- DiSantis, K. I., Hodges, E. A., Johnson, S. L., & Fisher, J. O. (2020). The role of responsive feeding in overweight during infancy and toddlerhood: A systematic review. *International Journal of Obesity*, 44, 1–11.
- FAO & WHO. (2021). Guiding principles for complementary feeding of the breastfed child. FAO.

- Fein, S. B., Labiner-Wolfe, J., Shealy, K. R., Li, R., Chen, J., & Grummer-Strawn, L. M. (2021). Infant Feeding Practices Study II: Results from the 2021–22 study. *Pediatrics*, 148(6), e2021050021.
- Hasselquist, K., Wagner, C. L., & Meier, P. P. (2024). Mother's own milk and optimal nutrition in preterm infants. *Frontiers in Nutrition*, 11, 1345768. <https://doi.org/10.3389/fnut.2024.1345768>
- LactaLogics. (2023). 93% breastfeeding success after donor human milk supplementation. <https://lactalogics.com/93-breastfeeding-success-after-short-term-donor-human-milk-supplementation/>
- National Institute of Child Health and Human Development (NICHD). (2024). Human milk reduces complications in preterm infants. <https://www.nichd.nih.gov/newsroom/news/020724-preterm-human-milk-study>
- Nguyen, P. H., Headey, D., Kim, S. S., Rawat, R., Ruel, M. T., & Menon, P. (2021). Infant and young child feeding practices and child undernutrition in South Asia: A review of evidence. *Maternal & Child Nutrition*, 17(S1), e13090.
- Okafor, C., Nnaji, I., & Eze, J. (2023). Determinants of infant feeding choices among HIV-positive mothers in Nigeria. *African Journal of Nursing and Community Practice*. <https://aspjournals.org/Journals/index.php/ajncp/article/view/235>
- Olowe, O. A., Sanyang, T., Atieno, M. L., et al. (2022). Feeding practices in neonatal units in Nigeria and Kenya: A cross-sectional survey. *BMC Pediatrics*, 22, 314. <https://doi.org/10.1186/s12887-022-03392-7>
- Perrin, M. T., Goodell, L. S., & Allen, J. C. (2024). Milk expression practices and lactation support in NICUs: Updated guidance. *Journal of Human Lactation*, 40(1), 10–18. <https://doi.org/10.1177/08903344231223354>
- Pickler, R. H., Best, A., & Crosson, D. (2023). Individualized, behavior-based feeding in preterm infants: A developmental approach. *Neonatology Today*, 18(8), 32–40. <https://neonatologytoday.org/archives/2023/08/1660/>
- Piwoz, E. G., Huffman, S. L., & Mbuya, M. N. N. (2023). Marketing of breast-milk substitutes: A barrier to breastfeeding. *The Lancet*, 401(10379), 534–544.
- Prado, E. L., Dewey, K. G., & Black, M. M. (2022). The challenges of improving complementary feeding practices in the context of rising food insecurity. *Annual Review of Nutrition*, 42, 127–149.
- Rollins, N. C., Bhandari, N., Hajeebhoy, N., Horton, S., Lutter, C. K., & Martines, J. C. (2021). Why invest, and what it will take to improve breastfeeding practices? *The Lancet*, 397(10292), 491–504.
- Tharner, A., Luijk, M. P., et al. (2020). Breastfeeding and behavioral development. *Journal of Child Psychology and Psychiatry*, 61(6), 678–687.
- UNICEF. (2023). Guidance on infant formula use. <https://www.unicef.org/nutrition/infant-formula>
- Usman, A., & Bukola, A. (2024). Factors influencing infant feeding choices of HIV-positive mothers in Southwestern Nigeria. *ResearchGate*. <https://www.researchgate.net/publication/283443276>
- Victora, C. G., Bahl, R., Barros, A. J. D., França, G. V. A., Horton, S., Krasevec, J., & Sankar, M. J. (2023). Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. *The Lancet*, 401(10379), 475–490.

World Health Organization. (2023). Feeding low-birth-weight infants: Recommendations. <https://www.ncbi.nlm.nih.gov/books/NBK586699/>

World Health Organization. (2023). HIV and infant feeding: Tools for health care providers. <https://www.who.int/tools/elena/interventions/hiv-infant-feeding>

World Health Organization (WHO). (2023). Use of donor human milk for low-birth-weight infants: Guideline. <https://www.who.int/tools/elena/interventions/donormilk-infants>

WHO & UNICEF. (2021). Global breastfeeding scorecard 2021: Protecting breastfeeding through bold national actions during the COVID-19 pandemic and beyond. WHO.

Zhang, L., et al. (2024). Effects of exclusive donor human milk feeding on enteral nutrition outcomes in preterm infants. *Frontiers in Pediatrics*, 12, 1345768. <https://doi.org/10.3389/fped.2024.1345768>