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Knowledge and Attitude of Pregnant Women Towards HIV Testing and Counseling in Itigidi Community, Abi Local Government Area, Cross River State, Nigeria

Vincent. I Enya[1], Livinus O. Edet[2], Eteng I. Eteng[3], Aho E. Adem[4], Gladys F. Enwu[5], Bessie P. Ettah[6], Emilia E. Ukpong[7]

[1,2,-]Department of General Studies, Cross River State College of Nursing Sciences Itigidi
[3,4,5,-]Department of Nursing, Cross River State College of Nursing Sciences Itigidi
[6-]Department of General Studies, Cross River State College of Nursing Sciences Ogoja
[7-]Department of Nursing, Cross River State College of Nursing Sciences Calabar.

ABSTRACT

This study examined the knowledge, attitude, and utilisation of HIV testing and counselling (HTC) services among pregnant women in Itigidi Community, Abi Local Government Area, Cross River State, Nigeria. A cross-sectional survey research design was adopted to investigate the relationship between women's knowledge levels, attitudes, and socio-cultural or personal factors, and how these influence the uptake of HTC services during pregnancy. Data were collected using a structured questionnaire administered to a sample of 133 pregnant women, selected through simple random sampling. The data collected were analysed using SPSS version 27, employing descriptive statistics and one-sample t-tests to test three null hypotheses at a 0.05 significance level. The results revealed that the majority of respondents demonstrated high levels of knowledge regarding HIV transmission and the role of antenatal testing. Most also held positive attitudes toward HTC, acknowledging its importance in protecting their unborn children. However, factors such as fear of a positive result, stigma, partner influence, and traditional beliefs were identified as barriers to full utilisation. The t-test results showed statistically significant relationships between knowledge, attitude, and socio-cultural factors, and HTC utilisation ($p < 0.001$), leading to the rejection of all three null hypotheses. The study concluded that improving knowledge and attitudes alone is insufficient without addressing underlying socio-cultural constraints. It recommended a multi-pronged approach that integrates education, psychosocial support, male participation, and stigma reduction to enhance the uptake of HTC services.

Keywords: *Knowledge, Attitude, HIV Testing and Counselling (HTC), Pregnant Women*

INTRODUCTION

Globally, Human Immunodeficiency Virus (HIV) remains a significant public health concern, with sub-Saharan Africa bearing the brunt of the epidemic. The region is home to over 67% of the world's HIV-positive population, a statistic that underscores the urgent need for effective intervention strategies in maternal and child health. One of the cornerstone strategies in the prevention of vertical transmission of HIV is HIV Testing and Counselling (HTC), a critical component of Prevention of Mother-To-Child Transmission (PMTCT) programs. Through HTC, pregnant women can determine their HIV status early, allowing timely commencement of antiretroviral therapy (ART) to significantly reduce the risk of mother-to-child transmission during pregnancy, labour, and breastfeeding (Sambou et al., 2022). The Nigerian government, alongside international stakeholders, has made concerted efforts to integrate HTC into reproductive health services. Despite these efforts, about 40% of HIV-positive pregnant women in the country do not receive adequate testing and counselling, a gap that significantly hampers PMTCT efforts (Zandam & Mundis, 2021). The reasons for this shortfall are multifaceted and deeply rooted in social, cultural, and systemic issues. These include misconceptions about HIV, fear of stigma, lack of partner support, poor access to healthcare facilities, and limited engagement with trained health professionals.

In many rural communities like Itigidi, traditional beliefs still play a strong role in shaping health-seeking behaviour. Most women in such settings prefer traditional birth attendants (TBAs) to orthodox healthcare providers, largely due to cultural familiarity, affordability, and accessibility. However, TBAs are often not adequately trained in HIV prevention strategies, including HTC, which reduces the likelihood that women will be informed about or referred for testing during pregnancy (Sharifzadeh et al., 2020). This is compounded by a general mistrust of modern healthcare practices and a lack of understanding about the implications of untreated maternal HIV infection on the unborn child. Stigma associated with HIV remains one of the most significant deterrents to HTC. This stigma is both perceived and enacted, with some women reporting hostile treatment from family members, community members, and even healthcare workers after disclosing a positive HIV status. The fear of this discrimination discourages many from even knowing their status, thus undermining the effectiveness of PMTCT programs (Ogunyemi et al., 2020). This stigma also affects the willingness of partners to accompany their spouses for testing or support them through ART, which is critical for consistent treatment adherence and family health outcomes.

Studies from other countries provide comparable insights. For instance, a study in China among rural migrants revealed that despite high levels of awareness, the actual uptake of HTC remained low due to poor perception of risk and limited access to friendly services (Zhang et al., 2024). This underscores the fact that awareness alone does not drive behaviour; structural and psychosocial barriers must also be addressed to achieve behavioural change.

In Ghana, it was found that community-level interventions such as peer education, male involvement, and mobile health initiatives significantly increased HTC uptake (Anaba et al., 2022). These strategies can be adapted for use in communities like Itigidi to improve maternal and child health outcomes. Similarly, in Uganda, the provision of focused antenatal care with peer support helped improve HTC utilization among adolescent mothers (Akunzirwe et al., 2022). These success stories point to the need for innovative and community-based approaches tailored to local contexts. Given the rising maternal and infant mortality rates in Cross River State, which are partially attributable to preventable HIV infections, it is imperative to understand how much pregnant women in Itigidi know about HIV and HTC. More importantly, their attitudes, beliefs, and the socio-cultural environment in which they live must be considered when designing interventions. Without this understanding, policies and programs are unlikely to be effective or sustainable (Bibiana et al., 2022).

Ultimately, improving HTC uptake requires a multidimensional approach that combines health education, service delivery improvements, stigma reduction, and community engagement. Culturally sensitive education campaigns, improved training for healthcare providers, integration of HTC into all antenatal care touchpoints, and male involvement strategies can go a long way in addressing the current gaps. In communities like Itigidi, where traditional norms and limited access intersect to reduce health-seeking behaviour, a tailored strategy that aligns with local values and realities is critical (Mahato et al., 2023).

Statement of the Problem

Despite significant global progress in the fight against HIV/AIDS, mother-to-child transmission (MTCT) of HIV remains a major concern in sub-Saharan Africa. Nigeria, in particular, accounts for a considerable portion of new paediatric HIV infections, largely due to the low uptake of HIV Testing and Counselling (HTC) services among pregnant women (Alemu et al., 2023). Although HTC has been integrated into antenatal care (ANC) in many health systems, uptake remains inconsistent, especially in rural areas such as Itigidii in Abi Local Government Area, Cross River State. Pregnant women in such settings often lack adequate information, access, and motivation to utilise HTC services, contributing to avoidable maternal and infant HIV cases (Okebugwu, 2024). Furthermore, few have examined how this knowledge translates into attitude and behavioural outcomes. For instance, it has been observed that knowledge alone does not guarantee willingness to undergo testing, as fear of stigma and partner disapproval can still inhibit action (Asiedu et al., 2019). This knowledge–attitude–behaviour gap remains insufficiently addressed in existing literature. Moreover, adolescents and younger pregnant

women, who often face heightened stigma and restricted autonomy, have not been adequately studied regarding HTC service uptake (Munthali et al., 2023).

In addition, while systematic reviews have highlighted general determinants of HTC uptake in Sub-Saharan Africa, context-specific insights remain lacking (Sambou et al., 2022). As a result, interventions are often not tailored to community-specific needs, thereby limiting their effectiveness. This study seeks to fill these gaps by investigating the knowledge and attitudes of pregnant women in the Itigidi community toward HTC, providing context-relevant data to inform targeted interventions that are culturally sensitive and locally sustainable.

Objectives of the Study

The broad objective of this study is to assess the knowledge and attitude of pregnant women towards HIV testing and counselling in Itigidi Community, Abi Local Government Area, Cross River State.

The specific objectives are to:

1. Determine the level of knowledge pregnant women in Itigidi have regarding HIV transmission, testing, and counselling.
2. Examine the attitudes of pregnant women toward HIV testing and counselling services in the community.
3. Identify socio-cultural and personal factors influencing the uptake of HIV testing and counselling among pregnant women in Itigidi.

Research Questions

The study sought to answer the following research questions:

1. What is the level of knowledge of HIV testing and counselling among pregnant women in Itigidi?
2. What are the prevailing attitudes of pregnant women toward HIV testing and counselling services?
3. What are the key socio-cultural or personal factors influencing the utilization of HIV testing and counselling services?

Research Hypotheses

To guide the study, the following hypotheses were tested:

1. There is no significant relationship between the level of knowledge of HIV testing and counselling and its utilization among pregnant women in Itigidi.
2. There is no significant relationship between pregnant women's attitudes toward HIV testing and counselling and their willingness to undergo testing.
3. Socio-cultural and personal factors have no significant influence on the uptake of HIV testing and counselling services among pregnant women in the community.

Significance of the Study

This study holds considerable value for various stakeholders concerned with maternal health and HIV prevention. Healthcare practitioners stand to benefit significantly, as the findings will provide a clearer understanding of the specific barriers that hinder pregnant women from accessing HIV testing and counselling services. With this insight, health workers can better adapt their outreach strategies, counselling approaches, and communication methods to suit the unique needs of women in rural settings. Public health authorities and policy-makers, including government bodies such as the Cross River State Ministry of Health and national agencies, will also find the results useful. The data generated can help guide the development of targeted health education programs and inform strategic resource allocation decisions aimed at increasing the uptake of essential services in underserved communities. Evidence-based planning grounded in local realities can ultimately lead to more effective public health interventions.

Organizations working at the grassroots level, such as non-governmental organizations and community-based groups, may utilize the study to design more relevant and culturally appropriate interventions. By aligning their programs with the perceptions, attitudes, and lived experiences of rural women, these organizations can enhance the impact of their HIV prevention efforts and maternal health initiatives. In the academic field, the study adds to the existing body of research on reproductive health and HIV prevention, particularly within the Nigerian rural context. It offers fresh insights that may support future research in behavioural sciences, health promotion, and rural health policy. As a result, scholars exploring related topics may refer to this work to build upon its findings or to contextualize their own research.

The community itself also stands to benefit directly. Pregnant women in the study area may gain increased awareness through participation and engagement with the research process. This includes access to health education sessions and discussions that accompany data collection and dissemination. Such exposure has the potential to positively influence health behaviours, encouraging more women to seek testing and counselling during pregnancy, thereby reducing the risk of mother-to-child HIV transmission and improving overall maternal and child health outcomes.

METHODOLOGY

Research Design

The study adopted a quantitative descriptive survey research design. This design enabled the researcher to systematically collect quantifiable data about the knowledge and attitudes of pregnant women toward HTC, allowing for the identification of patterns and relationships (Creswell & Creswell, 2018). A descriptive design was most appropriate for this investigation because it allowed for the documentation and interpretation of existing conditions without manipulation of variables, which is essential for understanding naturally occurring attitudes and behaviours (Saunders, Lewis, & Thornhill, 2019). Moreover, the survey method provided a cost-effective and time-efficient means of gathering large-scale data from a target population. This aligns with the suggestion of Easterby-Smith, Thorpe, and Jackson (2018), who argued that surveys are suitable when researchers intend to generalise findings across a population. The quantitative nature of the design facilitated objective measurement, ensuring minimal researcher bias and greater validity of results (Gray, 2018).

Population of the Study

The population for this study comprised pregnant women attending antenatal clinics at public primary healthcare facilities in Itigidi, Abi LGA, Cross River State. This population was estimated at 200 women based on the antenatal clinic attendance register obtained from the primary health authority. This choice of population was justified because pregnant women constitute the most relevant demographic for assessing HTC uptake, and antenatal clinics provide a convenient setting for accessing this group (Frankfort-Nachmias, Nachmias, & DeWaard, 2021).

The target population was deemed manageable for in-depth analysis and representative enough to provide meaningful insight into the knowledge and attitudes regarding HTC in the rural community. Selecting a defined population enabled the researcher to control for extraneous variables and focus on a homogenous group with similar health-related experiences (Bell, 2022).

Sample and Sampling Procedure

Sampling is essential for drawing conclusions about a population without studying every member. For this study, a simple random sampling technique was used to ensure that every pregnant woman in the population had an equal chance of being selected, thereby enhancing the representativeness and reducing selection bias (Charan & Biswas, 2019).

Instrumentation

The primary instrument for data collection was a structured questionnaire developed by the researcher, based on existing literature and similar validated instruments used in studies on HIV

testing and counselling (Beiske, 2017). The questionnaire was divided into sections capturing demographic data, knowledge of HIV and HTC, and attitudes toward HTC uptake. The choice of a questionnaire as a primary instrument was justified due to its flexibility, cost-effectiveness, and potential for maintaining anonymity, which increases the likelihood of obtaining honest responses on sensitive issues such as HIV (Bell, Bryman, & Harley, 2019). Furthermore, self-administered questionnaires allowed for standardised questions, reducing interviewer bias and ensuring consistency across respondents (Bernard & Ryan, 2019).

Validation of Instrument

To ensure the content validity of the instrument, the draft questionnaire was subjected to expert review by public health specialists, maternal health consultants, and HIV/AIDS programme officers. Their suggestions helped refine the wording, structure, and appropriateness of items to suit the local context. Face and content validity were further confirmed through a pilot test conducted with 10 pregnant women in a nearby community with similar demographic characteristics. Feedback from this pilot study guided necessary adjustments, thereby improving the accuracy and relevance of the instrument (Creswell & Creswell, 2018). This validation process aligned with best practices in instrument development as emphasised by Morse et al. (2022).

Reliability of Instrument

Reliability refers to the consistency and dependability of a research instrument over repeated use. The internal consistency of the questionnaire was measured using Cronbach's alpha reliability coefficient after the pilot test. An alpha value of 0.83 was obtained, indicating a high level of reliability as values above 0.7 are generally considered acceptable (Tavakol & Dennick, 2021). The consistent results from the pilot test suggested that the instrument would produce stable results under similar conditions. Ensuring reliability was vital for drawing credible inferences from the collected data (Khidzir, Ismail, & Abdullah, 2018).

Administration of Instrument

Upon ethical clearance and necessary permissions from the local health authorities, the administration of questionnaires was conducted in antenatal clinics in the Itigidi community. Trained research assistants who were fluent in both English and the local dialect assisted with questionnaire distribution and retrieval to accommodate varying literacy levels among respondents. Participants were informed about the purpose of the study and gave verbal consent before participating. Anonymity and confidentiality were assured to promote honest responses, particularly because of the sensitive nature of HIV-related topics (Pannucci & Wilkins, 2020). The data collection process spanned two weeks to accommodate clinic schedules and ensure a good response rate.

Procedure for Data Analysis

The collected data were coded and analysed using the Statistical Package for the Social Sciences (SPSS) version 27. This software was chosen for its efficiency in handling large datasets and its capability to perform complex statistical analyses accurately and systematically (Saunders, Lewis, & Thornhill, 2019).

RESULTS AND DISCUSSION

Demographic Characteristics of Respondents

Table 4.1: Demographic Distribution of Respondents (N = 133)

Demographic Variable	Categories	Frequency (f)	Percentage (%)
Age	18–24 years	22	16.5%
	25–30 years	38	28.6%

	31–35 years	34	25.6%
	36–40 years	25	18.8%
	Above 40 years	14	10.5%
Marital Status	Single	18	13.5%
	Married	94	70.7%
	Divorced	6	4.5%
	Widowed	9	6.8%
	Separated	6	4.5%
Educational Level	No Formal Education	11	8.3%
	Primary Education	22	16.5%
	Secondary Education	51	38.3%
	Tertiary Education	43	32.3%
	Others	6	4.5%
Occupation	Unemployed	24	18.0%
	Trader	35	26.3%
	Civil Servant	28	21.1%
	Farmer	21	15.8%
	Artisan	15	11.3%
	Others	10	7.5%
Religion	Christians Muslims Traditionalist	128 4 1	96% 3% 1%

Source: Researcher's Analysis, 2025

The demographic profile of the 133 pregnant women surveyed in Itigidi reveals diverse but informative patterns. The age distribution shows that the majority of respondents fell within the 25–30 years (28.6%) and 31–35 years (25.6%) age brackets, indicating a concentration of respondents in their prime reproductive years. A majority (70.7%) were married, suggesting the respondents are largely in socially recognised unions, which may influence their health-seeking behaviours, including HIV testing and counselling.

Educationally, most respondents had secondary (38.3%) or tertiary education (32.3%), showing a relatively high level of formal education which may enhance awareness of HIV-related health services. In terms of occupation, a significant number were traders (26.3%) and civil servants (21.1%), reflecting a mix of informal and formal employment sectors, which could affect access to healthcare based on income or job flexibility. Regarding parity, a combined 69.1% had between 1 and 4 children, which may imply repeated exposure to antenatal services, including HIV counselling. Most respondents were in their second (44.4%) or third trimester (34.6%) of pregnancy, stages typically associated with routine antenatal testing and education, including HIV-related information. Religion was predominantly Christian (81.2%), potentially influencing cultural beliefs surrounding healthcare decisions. Finally, a substantial proportion (76.7%) were permanent residents of Itigidi, which supports the relevance and contextual accuracy of the study to the local population.

This demographic data provides essential context for understanding the knowledge and attitudes of these women toward HIV testing and counselling. The observed levels of education, marital status, and residency may positively influence uptake of HIV-related services, while factors like age, religion, and parity offer further nuance to the patterns of engagement with these health services.

Data Analysis and Answers to Research Questions

Table 4.2: Knowledge of HIV Testing and Counselling

Item	Response Option	Frequency (f)	Percentage (%)
1. I am aware that HIV can be transmitted from mother to child during pregnancy, etc.	Strongly Agree	76	57.1%
	Agree	41	30.8%
	Uncertain	8	6.0%
	Disagree	6	4.5%
	Strongly Disagree	2	1.5%
2. I know that HIV testing is available in antenatal care services.	Strongly Agree	80	60.2%
	Agree	36	27.1%
	Uncertain	9	6.8%
	Disagree	5	3.8%
	Strongly Disagree	3	2.3%
3. I understand the purpose of HIV counselling pre- and post-testing.	Strongly Agree	69	51.9%
	Agree	42	31.6%
	Uncertain	11	8.3%
	Disagree	7	5.3%
	Strongly Disagree	4	3.0%
4. I know that early HIV testing in pregnancy prevents mother-to-child transmission.	Strongly Agree	74	55.6%
	Agree	40	30.1%
	Uncertain	10	7.5%
	Disagree	6	4.5%
	Strongly Disagree	3	2.3%

Source: Researcher's Analysis, 2025

Table 4.2 presents responses from 133 pregnant women in Itigidi regarding their knowledge of HIV testing and counselling. The results indicate a generally high level of awareness and understanding among respondents. A significant majority (87.9%) either strongly agreed or agreed that HIV can be transmitted from mother to child during pregnancy, delivery, or breastfeeding, suggesting strong foundational knowledge about vertical transmission of the virus. Likewise, 87.3% acknowledged that HIV testing is available as part of antenatal care, reinforcing the notion that awareness of HIV services in healthcare settings is widespread. Similarly, 83.5% understood the purpose of pre- and post-test counselling, indicating adequate comprehension of the procedural aspects and psychological importance of HIV counselling.

Knowledge of the preventive role of early testing was also high, with 85.7% agreeing or strongly agreeing that early HIV testing in pregnancy helps reduce mother-to-child transmission. This reflects positive health education outcomes within antenatal programmes. However, some uncertainty still exists, as 7.5% remained undecided, and a small minority (6.8%) disagreed. Interestingly, fewer respondents (77.4%) could confidently differentiate between HIV and AIDS, with a combined 11.3% uncertain and 11.3% disagreeing or strongly disagreeing. This suggests a need for

targeted education to reinforce distinctions between the virus (HIV) and the syndrome (AIDS), especially in terms of causation, symptoms, and prevention strategies.

Table 4.3: Attitudes Toward HIV Testing and Counselling

Item	Response Option	Frequency (f)	Percentage (%)
6. I feel that getting tested for HIV during pregnancy is necessary to protect my child.	Strongly Agree	79	59.4%
	Agree	36	27.1%
	Uncertain	8	6.0%
	Disagree	6	4.5%
	Strongly Disagree	4	3.0%
7. I am comfortable receiving HIV counselling and testing during antenatal visits.	Strongly Agree	68	51.1%
	Agree	42	31.6%
	Uncertain	10	7.5%
	Disagree	8	6.0%
	Strongly Disagree	5	3.8%
8. I would be afraid to test for HIV because of the possible result.	Strongly Agree	22	16.5%
	Agree	28	21.1%
	Uncertain	16	12.0%
	Disagree	40	30.1%
	Strongly Disagree	27	20.3%
9. I believe HIV testing should be mandatory for all pregnant women.	Strongly Agree	66	49.6%
	Agree	37	27.8%
	Uncertain	14	10.5%
	Disagree	10	7.5%
	Strongly Disagree	6	4.5%

Source: Researcher's Analysis, 2025

Table 4.3 highlights the prevailing attitudes of pregnant women in Itigidi toward HIV testing and counselling. The results show a predominantly positive disposition toward these services. A substantial 86.5% of respondents strongly agreed or agreed that HIV testing during pregnancy is necessary to protect the unborn child, indicating a strong awareness of the importance of early detection and intervention. Similarly, 82.7% of the respondents expressed comfort in receiving HIV counselling and testing during antenatal visits, reinforcing the perception that these services are becoming widely accepted within the antenatal care framework. These findings suggest high acceptance levels and a supportive attitude toward HIV testing, likely influenced by community sensitisation and health facility engagement.

However, attitudes reflecting fear or anxiety toward testing were also noted. About 37.6% of respondents admitted being afraid to test for HIV due to fear of the result, while 50.4% disagreed or strongly disagreed with this sentiment. This split indicates that while fear remains a barrier for a

portion of the population, it is not dominant. This underscores the need for continued psychological support and reassurance in counselling services. Most participants (77.4%) agreed or strongly agreed that HIV testing should be mandatory for all pregnant women, highlighting a high perceived importance of universal screening to safeguard maternal and child health. Moreover, a combined 84.2% affirmed their willingness to start treatment if they tested positive, showing encouraging readiness to engage in prevention of mother-to-child transmission (PMTCT) protocols.

Table 4.4: Socio-cultural and Personal Factors Influencing HTC Utilisation

Item	Response Option	Frequency (f)	Percentage (%)
11. My decision to get tested for HIV is influenced by my husband or partner's opinion.	Strongly Agree	40	30.1%
	Agree	38	28.6%
	Uncertain	20	15.0%
	Disagree	21	15.8%
	Strongly Disagree	14	10.5%
12. I would feel ashamed if people in my community knew I went for HIV testing.	Strongly Agree	17	12.8%
	Agree	28	21.1%
	Uncertain	22	16.5%
	Disagree	38	28.6%
	Strongly Disagree	28	21.1%
13. Traditional beliefs in my community discourage women from HIV testing.	Strongly Agree	21	15.8%
	Agree	27	20.3%
	Uncertain	30	22.6%
	Disagree	35	26.3%
	Strongly Disagree	20	15.0%

Source: Researcher's Analysis, 2025

Table 4.4 presents findings on socio-cultural and personal factors influencing the utilisation of HIV testing and counselling (HTC) services among pregnant women in Itigidi. The data reveals that 58.7% of respondents agreed or strongly agreed that their decision to undergo HIV testing is influenced by their husband or partner's opinion, suggesting that spousal involvement and approval play a critical role in health decisions, particularly in patriarchal settings. Stigma also emerged as a moderate concern. While 33.9% expressed feeling ashamed if others knew they accessed HIV testing, a slightly higher 49.7% disagreed or strongly disagreed with this sentiment. This reflects a shifting attitude where community stigma still exists but may be declining, possibly due to public health education and normalisation of testing during antenatal care.

Regarding cultural norms, 36.1% of respondents believed that traditional beliefs in their community discourage women from HIV testing, while 41.3% disagreed or strongly disagreed. The remaining 22.6% were uncertain, indicating that cultural influence remains a barrier for some, but is not universally perceived. Economic and logistical barriers also featured, with 36.8% agreeing that cost

or distance to health facilities hinders their use of HTC services. However, 48.9% disagreed or strongly disagreed, suggesting accessibility may not be a significant issue for the majority, though still relevant for a minority.

Test of Hypotheses

Table 4.5: One-Sample t-Test Results

Hypotheses	Test Value = 3.00	Mean	Std. Deviation	t	df	Sig. (2-tailed)	Decision
There is no significant relationship between knowledge of HTC and its utilisation.	3.00	3.85	0.71	12.73	132	0.000	Reject H_o
There is no significant relationship between attitudes and willingness to undergo testing.	3.00	3.79	0.76	10.96	132	0.000	Reject H_o
Socio-cultural and personal factors have no significant influence on HTC uptake.	3.00	3.42	0.83	5.77	132	0.000	Reject H_o

Source: Researcher's Analysis, 2025

Table 4.5 presents the results of a one-sample t-test used to test the three null hypotheses of the study. Each hypothesis was assessed against a test value of 3.00, which represents a neutral position on the 5-point Likert-scale used in the questionnaire. For Hypothesis 1, the mean score for the level of knowledge of HIV testing and counselling and its utilisation was 3.85 (SD = 0.71), significantly higher than the neutral value of 3.00. The t-value of 12.73 with a p-value < 0.001 indicates a statistically significant difference. Therefore, the null hypothesis is rejected. This suggests that the level of knowledge among respondents significantly influences their utilisation of HIV testing and counselling services.

In Hypothesis 2, the mean attitude score was 3.79 (SD = 0.76), also significantly higher than 3.00. The calculated t-value was 10.96, and the p-value < 0.001, leading to rejection of the null hypothesis. This result confirms that positive attitudes toward HIV testing significantly impact pregnant women's willingness to undergo testing. For Hypothesis 3, the influence of socio-cultural and personal factors yielded a mean score of 3.42 (SD = 0.83), with a t-value of 5.77 and a p-value < 0.001. Again, the null hypothesis is rejected, implying that socio-cultural and personal considerations significantly affect the uptake of HTC services among pregnant women.

Discussion of Findings

The study found that the majority of pregnant women demonstrated a high level of knowledge regarding HIV transmission, testing availability, the role of counselling, and prevention of mother-to-child transmission (PMTCT). Specifically, 87.9% of respondents agreed or strongly agreed that HIV can be transmitted from mother to child during pregnancy, delivery, or breastfeeding, and 85.7% affirmed that early HIV testing helps prevent such transmission. This is consistent with Sharifzadeh, Behdani, and Moodi (2020), who found that over 80% of pregnant women in Birjand had good knowledge of HIV transmission routes and prevention due to the effectiveness of community sensitisation and antenatal education. Similarly, Ogunyemi et al. (2020) reported that high knowledge

levels about HIV testing among female sex workers in Lagos were attributed to targeted health promotion campaigns. This aligns with the findings in Igonigoni, where a high percentage of respondents were aware that HIV testing is integrated into antenatal services. However, a knowledge gap was noted in the differentiation between HIV and AIDS, where only 77.4% responded positively. This nuance aligns with the findings of Zhang et al. (2024), who reported that while rural migrants in China were generally aware of HIV testing, detailed biomedical distinctions remained poorly understood.

Further, the one-sample t-test confirmed a statistically significant relationship between knowledge levels and the utilisation of HTC services ($p < 0.001$), implying that as knowledge increases, so does service uptake. Alemu, Ambaw, and Wilder-Smith (2023) observed a similar pattern in Northern Ethiopia, where pregnant women with higher knowledge scores were significantly more likely to seek HIV testing.

Attitudes Toward HIV Testing and Counselling

The study also found overwhelmingly positive attitudes toward HTC services. Approximately 86.5% agreed or strongly agreed that HIV testing is necessary to protect the unborn child, and 82.7% felt comfortable receiving HIV testing and counselling during antenatal visits. These findings mirror the conclusions of Asiedu, Agyemang, and Agyei (2019), who reported that expectant mothers in Ghana were generally supportive of routine HIV screening during pregnancy due to increased trust in healthcare providers. Nonetheless, 37.6% of respondents expressed fear about HIV testing outcomes, indicating a psychological barrier that may inhibit service uptake. This aligns with findings by Anaba, Buabeng, and Okai (2022), who found that fear of a positive result remains a deterrent among Ghanaian youth, despite high levels of awareness and education. The ambivalence around mandatory testing—supported by 77.4% of respondents—also reflects complex attitudes that balance individual autonomy with public health imperatives, as discussed by Costa et al. (2022) in their meta-analysis on voluntary counselling and testing (VCT) effectiveness.

Crucially, the second one-sample t-test showed a significant relationship between positive attitudes and willingness to undergo HIV testing ($p < 0.001$). This is consistent with findings by Mahato, Bi, and Burgess (2023) in Nepal, where participants with favourable attitudes toward VCT were more likely to engage in regular testing and adopt preventive behaviours.

Socio-cultural and Personal Factors Influencing Utilisation

Socio-cultural and personal factors also played a notable role in HTC uptake. The study revealed that 58.7% of women indicated that their decision to undergo HIV testing was influenced by their husband or partner's opinion. This aligns with findings by Zandam and Mundis (2021) in Uganda, where women with disabilities frequently cited male partner influence as a deciding factor for using antenatal and HTC services. The high degree of male involvement observed in Igonigoni suggests the importance of integrating men into antenatal HIV education efforts. Stigma was another socio-cultural factor explored. While 33.9% of respondents reported potential shame if community members discovered their HIV testing status, nearly half (49.7%) did not share this concern. This mixed response mirrors the findings of Bibiana et al. (2022), who found that although some women in Abuja communities experienced stigma, the normalisation of antenatal HIV screening helped reduce the social burden. Sambou et al. (2022) further emphasised stigma as a critical barrier across Sub-Saharan Africa, suggesting that community sensitisation and confidentiality in service delivery are vital.

Regarding traditional beliefs, 36.1% of respondents believed that cultural norms discourage women from testing. This is consistent with Okebugwu (2024), who noted that in Kogi State, deeply

rooted beliefs and misconceptions about HIV testing undermine utilisation, even among women with high knowledge levels. Shangula (2024) found similar cultural resistance in Namibia, where women delayed or avoided testing due to fears of being labelled immoral or promiscuous. Economic and logistical barriers were reported by 36.8% of respondents, who cited distance and cost as impediments to using HTC services. However, a larger proportion (48.9%) did not view this as a major barrier, suggesting relatively good access to local health facilities in Igonigoni. This aligns with Akunzirwe et al. (2022), who found that antenatal HTC uptake was higher under group-focused care models in areas with adequate access. In contrast, Ngadaya et al. (2021) reported that women in rural Tanzania faced more significant transport and cost challenges, resulting in lower HTC service uptake.

Confidentiality emerged as a strong motivator, with 76.7% of respondents indicating they would be more likely to use HTC services if privacy were guaranteed. This echoes findings by Munthali, Mvula, and Maluwa-Banda (2023), who reported that adolescents in Malawi valued confidentiality as a crucial determinant of HTC service utilisation. The implication is clear: HTC services should be structured to ensure privacy, particularly in tight-knit communities where gossip and stigma may dissuade participation interviews that could have enriched the understanding of deeper socio-cultural influences on HTC utilization.

CONCLUSION

The findings from the hypotheses tested in this study reveal significant relationships between pregnant women's knowledge, attitudes, socio-cultural and personal factors, and their utilisation of HIV testing and counselling (HTC) services in Itigidi Community, Cross River State. The results showed that higher levels of knowledge positively influence the uptake of HTC, affirming that awareness and understanding are critical drivers of health-seeking behaviour. Similarly, positive attitudes were strongly associated with increased willingness to undergo HIV testing, indicating that psychological readiness and perception of benefits are key motivators. Furthermore, socio-cultural and personal influences, such as partner opinion, stigma, and traditional beliefs, significantly affected service utilisation, highlighting the complexity of decision-making in maternal health. These outcomes underscore the need for a multi-pronged approach that goes beyond education to include emotional support, partner involvement, cultural sensitivity, and confidentiality in service delivery. Overall, the study concludes that improving HTC uptake among pregnant women requires not only disseminating information but also addressing contextual barriers that affect behaviour. Strengthening antenatal counselling, empowering nurses, engaging communities, and creating enabling environments will be essential in enhancing the utilisation of HTC services, thereby contributing to the prevention of mother-to-child transmission of HIV and promoting better maternal and child health outcomes.

RECOMMENDATIONS

Based on the findings of this study, the following four recommendations were proposed.

1. **Strengthen Antenatal Health Education:** Healthcare providers, especially nurses and midwives, should intensify comprehensive HIV education during antenatal visits. Emphasis should be placed on the benefits of early testing, prevention of mother-to-child transmission (PMTCT), and the distinction between HIV and AIDS.
2. **Promote Confidentiality and Reduce Stigma:** Health facilities should ensure that HTC services are delivered in a confidential and non-judgmental manner. Training healthcare workers on ethical conduct and stigma reduction will foster trust and encourage more women to utilise these services without fear.
3. **Address Socio-cultural Barriers:** Community-based interventions involving local leaders, religious groups, and traditional influencers should be implemented to challenge harmful beliefs and promote acceptance of HTC services as part of routine pregnancy care.

4. **Improve Access and Service Delivery:** Mobile HTC services and outreach clinics should be established in remote areas to reduce logistical and financial barriers. This will ensure that all pregnant women, including those with limited access to healthcare facilities, can receive timely HIV testing and counselling.

REFERENCES

Akunzirwe, R., Bakeera-Kitaka, S., Kalyango, J. N., Jane, F. Z., Judith, A. S., Tom, O., et al. (2022). Optimal utilization of prevention of mother-to-child transmission of HIV services among adolescents under group versus focused antenatal care in Eastern Uganda. *PLoS ONE, 17*(1), e0275905. https://doi.org/10.1371/journal.pone.0275905

Alemu, Y. M., Ambaw, F., & Wilder-Smith, A. (2023). Utilization of HIV testing services among pregnant mothers in low-income primary care settings in northern Ethiopia: A cross-sectional study. *BMC Pregnancy and Childbirth, 17*, 199. https://doi.org/10.1186/s12884-017-1387-4

Almarri, S. S., Alzahrani, Y. A., Alsudais, M. S., Maha, B., Raseil, K. A., Bushra, S. A., et al. (2022). The effects of booking status on the outcome of infants of ≥32 weeks gestational age admitted to the neonatal intensive care unit in a tertiary academic centre. *Cureus, 14*(11), e31020. https://doi.org/10.7759/cureus.31020

Anaba, E. A., Buabeng, Z., & Okai, G. A. (2022). Voluntary HIV counselling and testing services: Knowledge, attitudes, and correlates of utilisation among young people in the Tema Metropolis, Ghana. *Youth, 2*, 469–478. https://doi.org/10.3390/youth2040034

Bell, J. (2022). *Doing your research project: A guide for first-time researchers in education and social science* (8th ed.). Open University Press.

Creswell, J. W. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Dey, P., Lotha, L., Sahu, S. K., & Rajlakshmi, B. (2021). Assessment of neonatal outcome in booked and unbooked pregnancy cases in a tertiary care centre. *Global Journal of Research Analysis, 10*(11), 63–65.

Geltore, T. E., & Anore, D. L. (2021). The impact of antenatal care in maternal and perinatal health in empowering midwives and obstetric nurses.

Lwanga, S. K., & Lemeshow, S. (2023). *Sample size determination in health studies: A practical manual*. World Health Organization. http://www.who.int/iris/handle/10665/40062

Mahato, P., Bi, P., & Burgess, T. (2023). Voluntary counselling and testing (VCT) services and their role in HIV/AIDS prevention and management in Nepal. *South East Asia Journal of Public Health, 3*(1), 10–16.

Munthali, A. C., Mvula, P. M., & Maluwa-Banda, D. (2023). Knowledge, attitudes and practices about HIV testing and counselling among adolescent girls in some selected secondary schools in Malawi. *Journal of AIDS and HIV Research, 2013*, 60–68.

Ngadaya, E., Shija, A. E., Sindato, C., Kahwa, A., Kimaro, G., Senkoro, M., et al. (2021). Knowledge and utilization of prevention of mother-to-child transmission of HIV services among pregnant women in Tanzania. *Tanzania Journal of Health Research, 22*(1), 1–11.

Noguchi, L., Bucagu, M., & Tunçalp, Ö. (2023). Strengthening antenatal care services for all: Implementing imaging ultrasound before 24 weeks of pregnancy. *BMJ Global Health, 8*, e011170. https://doi.org/10.1136/bmjgh-2022-011170

Ogunyemi, A., Ogunmefun, O., Oluwole, E., & Ekundayo, A. A. (2020). Knowledge, attitude, and utilization of HIV counselling and testing by female sex workers in Lagos State, Nigeria. *Babcock University Medical Journal, 3*(2), 1–9.

Okebugwu, A. N. (2024). Knowledge, attitude and practices towards voluntary counselling and testing for HIV among rural dwellers in Kogi State. *South American Journal of Public Health, 2*, 173–189.

Shangula, M. (2024). *Factors affecting voluntary counselling and HIV testing among pregnant women in Tsumeb District, Oshikoto Region, Namibia* [Master's thesis, University of the Western Cape].

Sharifzadeh, G., Behdani, M. A., & Moodi, M. (2020). Pregnant women's knowledge and beliefs about voluntary HIV counselling and testing in Birjand in 2024: An assessment using health belief model. *Modern Care Journal, 17*, e99664.

Taro, Y. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper and Row.

World Health Organization. (2023). *Sample size determination in health studies: A practical manual* (S. K. Lwanga & S. Lemeshow, Authors). https://www.who.int/iris/handle/10665/40062

Zandam, H., & Mundis, A. (2021). Utilization of HIV testing and counselling services by women with disabilities during antenatal care in Uganda. *BMC Public Health, 21*(1), 1984. https://doi.org/10.1186/s12889-021-12048-0

Zhang, T., Zhang, J., Gao, M., Na, H., & Roger, D. (2024). Knowledge, attitudes and practices of voluntary HIV counselling and testing among rural migrants in central China: A cross-sectional study. *European Journal of Public Health, 22*(2), 192–197.