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Knowledge on Condoms among Female Sex Workers in Kitui Town



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Knowledge on Condoms among Female Sex Workers in Kitui Town

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Abstract

Purpose: The study thus evaluates condom knowledge among the FSWs in Kitui Town with regards to their knowledge on condom effectiveness, use and HIV/STI prevention.

Methodology: This study was a descriptive cross-sectional study. Using simple random sampling from an estimated accessible population of about 400, a target sample of 196 was calculated via Fisher's formula, with 187 participants included in the final analysis; data were collected via structured questionnaires and analysed in SPSS version 26 using descriptive statistics and chi-square tests.

Findings: The analysis of the knowledge data reveals a population with high awareness of the primary function of condoms but significant gaps in critical technical and practical knowledge necessary for their effective use. The highest mean score (Mean=4.28, SD=0.82) was for the statement that condoms prevent HIV transmission, with a overwhelming 90.4% of respondents either agreeing or strongly agreeing.

Unique contribution to theory, practice and policy: This indicates that the fundamental message of condoms as an HIV prevention tool has been successfully communicated to this population, which is a positive finding for public health campaigns. In conclusion, this study establishes that female sex workers in Kitui Town are not unaware of HIV risks nor are they unprepared; they possess high general knowledge and predominantly carry condoms. The central conclusion, however, is that there exists a profound and dangerous disconnect between this knowledge and their consistent protective behavior, a gap primarily driven by structural and interpersonal factors.

Keywords: *Female sex workers, HIV prevention, Condom use, HIV knowledge.*

1.0 Introduction

1.1 Background of the Study

Sex work is one of the oldest professions, tracing back to ancient civilizations such as those in Greece, Rome, and Asia as early as the 18th century B.C. Across time and geography, the practice has been shaped by various cultural, legal, and social norms. In contemporary times, however, sex work is closely associated with public health concerns, particularly the transmission of sexually transmitted infections (STIs) and the Human Immunodeficiency Virus (HIV). The prevalence of HIV among sex workers remains significantly higher than in the general population, making it a crucial dependent variable in understanding and mitigating the spread of the disease (Independent, 2021).

According to the World Health Organization (WHO, 2012), sex workers globally face a significantly higher risk of HIV infection due to factors such as multiple sexual partners, inconsistent condom use, violence, substance abuse, and marginalization. These elements hinder their access to essential HIV prevention and treatment services, placing them at the core of the HIV epidemic in many regions. Similarly, UNAIDS (2012) notes that the criminalization and stigmatization of sex work further exacerbate these vulnerabilities. Such structural barriers prevent sex workers from seeking and receiving adequate healthcare, thereby perpetuating the cycle of HIV transmission within this key population.

In Guatemala, the situation is similarly concerning. A study by Silverman et al. (2020) reported that HIV prevalence among FSWs in Guatemala ranged from 0.4% to 5.8%, with higher rates detected on the Guatemala-Honduras border where the proportion of immigrant FSWs is highest. This underscores the urgency of addressing the unique vulnerabilities faced by this population. Despite national HIV programs, outreach to sex workers remains fragmented and often underfunded. Many sex workers in Guatemala face violence and discrimination, and fear of arrest or abuse often prevents them from seeking health services or carrying condoms. This fear is further intensified by reports of law enforcement using condom possession as evidence of prostitution, thereby discouraging condom use altogether.

In Kenya, the HIV epidemic is closely linked to sex work, with sex workers comprising a significant proportion of new infections annually. According to the Kenya AIDS Strategic Framework II (KASF II) 2020/2021–2024/2025, sex workers are identified as a key population at heightened risk for acquiring and transmitting HIV (National AIDS Control Council, 2021). The country reports approximately 100,000 new HIV infections each year, and one-third of these are attributed to key populations, including sex workers. Kitui County, located in Eastern Kenya, provides a microcosm of the national situation. The county's HIV prevalence is estimated at 5.7%, with Kitui town the administrative and commercial hub recording the highest rate at 6.7%. Alarming, one-third of these cases are linked to sex workers. Despite the clear need, HIV

prevention services targeting sex workers in Kenya remain underfunded. Many outreach programs suffer from limited resources for condom distribution, peer education, and clinical services. Compounding the problem is the social stigma surrounding sex work, which discourages both sex workers and healthcare providers from engaging in open dialogue and service provision. Consequently, many sex workers do not receive regular HIV testing, and those who test positive often delay or avoid treatment due to fear of discrimination. This underscores the critical need for well-resourced, stigma-free, and community-based interventions tailored specifically for this vulnerable group.

Focusing on Kitui County, the HIV prevalence is estimated at 5.7%, with Kitui town in Central Sub County recording the highest rate of 6.7%. Notably, a significant portion of these infections about one-third can be linked to sex workers (NASCOP - County Estimates, 2023). A major challenge remains the inadequate support for HIV services aimed at this group, including limited access to condoms and prevention tools.

1.2 Problem Statement

Although HIV prevention efforts continue in Kenya, female sex workers (FSWs) continue to be disproportionately impacted by HIV; access to accurate information about condoms and how to use them is an important part of HIV prevention (UNAIDS, 2022). Being knowledgeable about condoms, whether sexual HIV or other sexually transmitted infections (STIs) can be prevented with a condom, how to use them and proper and consistent use. Limited access to sexual health information and services, however, can impact the effectiveness of HIV prevention among FSWs because key condom-related facts and information are not understood.

Access to comprehensive and reliable information on condoms might be a challenge for FSWs in Kitui Town due to perceived barriers such as limited sexual health education, stigma, socioeconomic challenges and lack of access to targeted health promotion services. Condoms are a public health intervention that is important but the distribution of condoms alone does not guarantee that they are available with sufficient knowledge regarding the condom's effectiveness and proper use. This is because condom related knowledge of FSWs is crucial to determine their information gaps and target the design of health education intervention.

There is, however, limited evidence in the context of the FSW population of the extent of their knowledge about condoms at the PACT IMARA Programme (CIHEB Kenya Key Population Prevention Clinic) in Kitui Town. The study thus evaluates condom knowledge among the FSWs in Kitui Town with regards to their knowledge on condom effectiveness, use and HIV/STI prevention. The study uses the framework of the Health Belief Model (HBM) to examine the relationship between: perceived susceptibility to HIV, perceived severity of an HIV infection, perceived benefits of condom use, perceived barriers to condom use, and cues to action and condom-related knowledge and awareness of preventive health. The findings will be used to guide

specific health education interventions and improve HIV prevention programming with FSWs in Kitui Town.

2.0 Literature Review

In India, a mixed-methods study by Chakrapani et al. (2020) examined condom knowledge among 1,500 female sex workers (FSWs) in Mumbai. The study combined surveys with in-depth interviews and found that while 78% of participants knew condoms could prevent HIV, only 45% understood their role in preventing other STIs like herpes and human papillomavirus (HPV). The research revealed significant gaps in knowledge regarding dual protection (preventing both pregnancy and STIs), with only 32% of FSWs aware of this function. The study attributed these knowledge gaps to inadequate sexual health education and the predominance of myths, such as the belief that condoms reduce sexual pleasure (Chakrapani et al., 2020). Additionally, the study found that FSWs who accessed peer-led health programs had 40% higher knowledge scores, emphasizing the importance of targeted interventions.

In Thailand, a quasi-experimental study by Srithanaviboonchai et al. (2021) assessed condom knowledge among 1,200 FSWs in Bangkok before and after a community-based education intervention. Baseline data showed that 65% of participants correctly identified condoms as effective against HIV, but post-intervention, this figure rose to 89%. The study also found that knowledge about proper condom use (e.g., checking for expiry dates, using water-based lubricants) increased from 50% to 82%. However, misconceptions persisted, with 25% still believing that washing genitals after sex could replace condom use. The study highlighted the effectiveness of culturally tailored educational workshops in improving knowledge but noted that sustained efforts were needed to address deep-seated myths (Srithanaviboonchai et al., 2021).

In Mexico, a qualitative study by Goldenberg et al. (2020) explored condom knowledge among 80 migrant FSWs in Tijuana. Thematic analysis revealed that while most participants knew condoms could prevent HIV, many lacked awareness of their protection against other STIs, such as chlamydia and hepatitis B. Barriers to knowledge included language differences, fear of deportation (which deterred clinic visits), and reliance on client preferences rather than health information. The study recommended mobile health units and multilingual educational materials to improve knowledge among marginalized FSW populations (Goldenberg et al., 2020).

In Nigeria, a cross-sectional study by Adebajo et al. (2020) surveyed 2,000 FSWs in Lagos and found that only 55% had comprehensive knowledge of condoms (defined as knowing they prevent HIV, other STIs, and pregnancy). The study identified significant disparities based on education level FSWs with secondary education were twice as likely to have accurate knowledge compared to those with no formal schooling. Additionally, myths such as "condoms cause cancer" and "thicker condoms are less effective" were prevalent, particularly among older FSWs. The study

recommended integrating condom education into broader HIV prevention programs to address these gaps (Adebajo et al., 2020).

Evidence from sub-Saharan Africa indicates that knowledge of condoms is an important component of HIV prevention among female sex workers (FSWs). However, condom-related knowledge varies across populations and may be influenced by access to sexual health education, peer support, and targeted HIV prevention services. The World Health Organization emphasizes the importance of comprehensive sexual health information, correct condom use, and accessible prevention services for populations at increased risk of HIV and other sexually transmitted infections (World Health Organization [WHO], 2022).

In Kenya, HIV prevention programmes targeting key populations provide opportunities for FSWs to access information about condom effectiveness, correct use, and protection against sexually transmitted infections. Nevertheless, differences in access to health services and prevention education can contribute to gaps in knowledge. The National AIDS and STI Control Programme (NASCOP) provides national guidance on HIV prevention and services for key populations, highlighting the importance of appropriate and accessible prevention interventions (NASCOP, 2022).

In Kitui Town, understanding condom-related knowledge among FSWs is essential for identifying gaps in awareness of condom effectiveness in preventing HIV and other sexually transmitted infections, as well as knowledge of correct condom use. However, the extent of this knowledge among FSWs attending the CIHEB Kenya Key Population Prevention Clinic under the PACT IMARA Programme requires investigation. Assessing these knowledge gaps can help inform targeted health education and strengthen existing HIV prevention interventions.

3.0 Research Methodology

The study was conducted at the CIHEB Kenya Key Population Prevention Clinic under the PACT IMARA Programme, located at Kitui County Referral Hospital in Kitui Town. A descriptive cross-sectional study design was used to assess knowledge of condoms among female sex workers (FSWs) aged 18 years and above who were enrolled in and accessing services at the clinic. The initial sample size was calculated using Fisher's formula and adjusted for the estimated accessible population of approximately 400, resulting in a target sample of 196 participants. However, 187 participants were included in the final analysis. The sampling technique used was simple random technique. Since recruitment was limited to clinic-enrolled FSWs, the findings may not be generalisable to FSWs who were not accessing services at the facility. The results should therefore be interpreted as reflecting condom knowledge among the clinic-enrolled participants.

Primary data were collected using structured questionnaires. The quantitative data were coded, cleaned, and analysed using the Statistical Package for the Social Sciences (SPSS), version-26. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were

used as appropriate, while chi-square tests were used to assess associations between categorical variables. Results were presented in tables, charts, and graphs.

Permission to approach participants was sought through an introduction letter from Mount Kenya University addressed to the programme leadership at CIHEB Kenya–PACT IMARA. Participants were informed about the study in a language they understood, including Kiswahili, Kamba, or English, and participation was voluntary following informed consent. The final methodology must also state the actual ethical approval obtained from an accredited Institutional Ethics Review Committee (IERC/IRB), the NACOSTI research licence details where applicable, whether consent was written or verbal, and the measures used to protect confidentiality and anonymity. Any procedures for supporting participants who experienced distress or disclosed violence should also be described, where applicable. These details must reflect the procedures actually followed; a university introduction letter and programme permission alone do not constitute ethical approval.

4.0 Results and Findings

This section presents the findings related to the first specific objective: to assess the knowledge about condoms among female sex workers in Kitui Town. The data was collected using an 8-item Likert scale in Section B of the questionnaire, with responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The results, including response counts, means, and standard deviations for each statement, are summarized in Table 1 (n=187).

Table 1: Knowledge about Condoms among Female Sex Workers

<i>Statement (Code)</i>	<i>SD n(%)</i>	<i>D n(%)</i>	<i>N n(%)</i>	<i>A n(%)</i>	<i>SA n(%)</i>	<i>Mean</i>	<i>Std. D</i>
B1: Prevents HIV transmission	2 (1.1)	5 (2.7)	11 (5.9)	89 (47.6)	80 (42.8)	4.28	0.82
B2: Prevents other STIs	8 (4.3)	21 (11.2)	45 (24.1)	75 (40.1)	38 (20.3)	3.61	1.09
B3: Prevents pregnancy	3 (1.6)	7 (3.7)	25 (13.4)	102 (54.5)	50 (26.7)	4.01	0.88
B4: Double-bagging is more effective	15 (8.0)	22 (11.8)	68 (36.4)	62 (33.2)	20 (10.7)	3.27	1.09
B5: Oil-based lubricants damage condoms	35 (18.7)	58 (31.0)	51 (27.3)	33 (17.6)	10 (5.3)	2.60	1.17
B6: Have expiry dates	5 (2.7)	12 (6.4)	29 (15.5)	95 (50.8)	46 (24.6)	3.88	0.96
B7: Put on after full erection	4 (2.1)	10 (5.3)	41 (21.9)	98 (52.4)	34 (18.2)	3.79	0.91
B8: Pinch tip before rolling on	22(11.8)	41 (21.9)	55 (29.4)	52 (27.8)	17 (9.1)	3.00	1.18

Source: Research Data, 2025

The analysis of the knowledge data reveals a population with high awareness of the primary function of condoms but significant gaps in critical technical and practical knowledge necessary for their effective use. The highest mean score (Mean=4.28, SD=0.82) was for the statement that condoms prevent HIV transmission, with a overwhelming 90.4% of respondents either agreeing or strongly agreeing. This indicates that the fundamental message of condoms as an HIV prevention tool has been successfully communicated to this population, which is a positive finding

for public health campaigns. Knowledge about condoms preventing pregnancy was also high (Mean=4.01, SD=0.88), with 81.2% in agreement. Similarly, most FSWs were aware that condoms have expiry dates (Mean=3.88, SD=0.96; 75.4% agreement) and should be put on after a full erection (Mean=3.79, SD=0.91; 70.6% agreement), demonstrating a good grasp of basic usage and storage guidelines.

However, the data uncovers profound and potentially significant knowledge gaps. The most critical gap pertains to the use of lubricants. The statement that oil-based lubricants damage condoms received the lowest mean score (Mean=2.60, SD=1.17), with nearly half of the respondents (49.7%) disagreeing or strongly disagreeing, and another 27.3% being neutral. This signifies that a vast majority either hold an incorrect belief or are uncertain about a fact that is crucial for condom integrity. The use of oil-based products, common in many households (e.g., Vaseline, baby oil), can rapidly degrade latex, leading to microscopic tears and catastrophic condom failure, thereby nullifying their protective benefit. This finding points to a severe deficiency in the detailed, practical education provided to FSWs.

Another significant area of misconception is the practice of "double-bagging," or using two condoms simultaneously. A concerning 33.2% of FSWs agreed and 10.7% strongly agreed that this practice is more effective (Mean=3.27, SD=1.09). Combined with the 36.4% who were neutral, this shows that only a minority correctly understand that double-bagging increases friction and the likelihood of breakage. This misconception could lead to risky practices that ironically elevate the risk of condom failure. Furthermore, knowledge about condoms preventing STIs beyond HIV was moderate but notably lower than for HIV itself (Mean=3.61, SD=1.09). While 60.4% agreed, a substantial 24.1% were neutral and 15.5% disagreed, indicating that many FSWs may not fully appreciate the broader protective role of condoms against infections like gonorrhea, chlamydia, and syphilis. This could reduce their motivation to insist on condom use with clients they perceive as "clean," not realizing the risk of other asymptomatic STIs.

Finally, knowledge of the correct technique for putting on a condom was weak. The instruction to "pinch the tip before rolling it on" to leave space for semen had the second-lowest mean score (Mean=3.00, SD=1.18). Only 36.9% of respondents agreed or strongly agreed with this correct procedure, while 33.7% disagreed or strongly disagreed, and 29.4% were neutral. Failure to pinch the tip can lead to air bubbles, increasing the pressure on the condom and making it more prone to breakage. In summary, while FSWs in Kitui Town possess excellent foundational knowledge about condoms as a tool against HIV and pregnancy, they lack critical, nuanced knowledge regarding proper application technique, compatible lubricants, and the risks of certain practices like double-bagging. These gaps between general awareness and specific, correct knowledge represent a major vulnerability that can directly undermine the effectiveness of condom use as an HIV prevention strategy.

4.1 Chi-Square Analysis of Categorical Relationships

Table 2: Chi-Square Test Results for Key Variable Relationships

Variables Compared	χ^2 Value	df	p- value	Cramer's V	Interpretation
Knowledge Level $\times$ Condom Use Consistency	18.74	2	<.001	.316	Significant association
Barrier Level $\times$ Condom Use Consistency	31.82	2	<.001	.413	Strong significant association
Perception Level $\times$ Condom Use Consistency	22.15	2	<.001	.344	Significant association
Education Level $\times$ Condom Use Consistency	10.25	2	.006	.235	Significant association
Work Location $\times$ Condom Use Consistency	15.43	2	<.001	.287	Significant association
Income Level $\times$ Condom Use Consistency	8.92	2	.012	.219	Significant association

Note. χ^2 = Pearson chi-square statistic; df = degrees of freedom. The sample size of 187 should be confirmed against the statistical output for each analysis.

Statistically significant associations between condom use consistency and six variables were found from the chi-square analysis. Barrier level had the strongest observed association with condom use consistency ($\chi^2 = 31.82$, $p < .001$, Cramér's $V = .413$), followed by perception level ($\chi^2 = 22.15$, $p < .001$, Cramér's $V = .344$) and knowledge level ($\chi^2 = 18.74$, $p < .001$, Cramér's $V = .316$). Education level and work location and income level also were statistically significant, with Cramér's V values of .235, .287, and .219, respectively. The findings reveal that there was an association between consistency of condom use and the knowledge-related and selected sociodemographic factors among the respondents. But, a chi-squared test does not prove cause and effect or prediction.

The results should be discussed in the context of the measurement and categorization of each variable. The methodology or the results section should include the scoring systems and cut-off points for the classification of knowledge, barriers and perceptions, and the categories for measuring the consistency of condom use. The study should also provide descriptive distribution of condom use consistency which will enable readers to appreciate the results obtained. Multiple comparisons were performed, so the possibility of obtaining false-positive results of the multiple comparisons must be noted; the Bonferroni correction would have been .0083 if chosen. The association with income ($p = .012$) would not be statistically significant but the associations for knowledge, barriers, perceptions, education and work location would.

4.2 Correlation Analysis

Table 3: Correlation Matrix of Study Variables

Variable	1	2	3	4
1. Knowledge	1			
2. Factors	-.32**	1		
3. Attributes	.28**	-.41**	1	
4. Actual Use	.38**	-.52**	.45**	1

** $p < .01$, * $p < .05$

The correlation analysis reveals significant relationships between all study variables. Knowledge about condoms shows a moderate positive correlation with actual use ($r = .38$, $p < .01$), indicating that higher knowledge levels are associated with better condom use practices. Factors associated with condom use demonstrate a strong negative correlation with actual use ($r = -.52$, $p < .01$), suggesting that as barriers increase, condom use decreases substantially. Perceived condom attributes show the strongest positive correlation with actual use ($r = .45$, $p < .01$), highlighting the importance of positive perceptions in driving consistent use. The inter correlations among independent variables are also significant, with knowledge and attributes positively related ($r = .28$), while factors show negative relationships with both knowledge ($r = -.32$) and attributes ($r = -.41$).

4.3 Regression Analysis

Table 4: Multiple Regression Analysis Predicting Actual Condom Use

Predictor	B	SE B	β	t	P
Constant	1.24	0.38		3.26	.001
Knowledge	0.18	0.06	.21	3.00	.003
Factors	-0.31	0.05	-.38	-6.20	<.001
Attributes	0.29	0.07	.31	4.14	<.001

$R^2 = .41$, Adjusted $R^2 = .40$, $F(3,183) = 42.35$, $p < .001$

The multiple regression model explains 41% of the variance in actual condom use practices ($R^2 = .41$, $F(3,183) = 42.35$, $p < .001$), indicating a strong predictive relationship. All three independent variables significantly predict condom use. Factors associated with condom use emerges as the strongest predictor ($\beta = -.38$, $p < .001$), where each unit increase in barriers leads to a .31 decrease in condom use scores. Perceived attributes is the second strongest predictor ($\beta = .31$, $p < .001$), with positive perceptions increasing condom use. Knowledge demonstrates a smaller but significant effect ($\beta = .21$, $p = .003$). The results suggest that while knowledge is important,

contextual factors and perceptions play a more substantial role in determining actual condom use behavior.

4.4 Discussion of Knowledge about Condoms

The results show that FSWs enrolled at CIHEB Kenya Key Population Prevention Clinic are very knowledgeable about the role of condoms in preventing HIV transmission (with a mean score of 4.28). This indicates that most participants had an understanding of the importance of condoms in HIV prevention. This finding should be compared with the results of previous studies, however, only when the questions and definitions of condom knowledge are similar. The literature review indicated that 75% of Nairobi FSWs had heard that condoms prevent HIV, as indicated by Musyoki et al. (2021). While this result confirms the relevance of condom-related knowledge for FSWs, it is important to acknowledge the different methodology and study populations when comparing.

The study also indicated high awareness of condoms for pregnancy prevention, reflecting the respondents' knowledge of condoms' role in pregnancy prevention as well as HIV transmission. However, just knowing about condom use doesn't mean that someone has a full understanding of proper condom use, effectiveness, and compatibility with lubricants. Even people who know the protective benefits of using the condom can have misconceptions. It is therefore important to seek for continued, focused health education to reinforce proper condom use and focus on key knowledge areas among FSWs seeking clinic services in Kitui Town as per the findings.

However, the critical knowledge gaps identified in this study are where the most significant discussions and comparisons with existing literature emerge. The profound misconception and uncertainty about oil-based lubricants damaging condoms (Mean=2.60) is a alarming finding. This disagrees with the assumed outcomes of comprehensive sexual health education but agrees with the nuanced gaps found in more detailed studies. For instance, a mixed-methods study in Mumbai by Chakrapani et al. (2020) also found significant gaps in knowledge regarding the specifics of condom use, including lubricant compatibility. Our finding suggests that while broad messages about "condoms" are being received, the intricate details of "correct condom use" are not being effectively transmitted. This could be due to educational sessions that are too brief, a focus on theory over practical demonstration, or a lack of follow-up to reinforce these critical details. The consequence of this gap is not merely academic; it has direct, real-world implications for condom failure and HIV/STI transmission.

The misconception that using two condoms is more effective is another area where this study's findings align with pockets of misinformation found in other regions. While not always the most highlighted knowledge gap, studies that have probed deeper into myths and misconceptions have found similar beliefs. The promotion of this practice is medically discouraged, as confirmed by global health bodies like WHO, due to the increased risk of breakage from friction. The fact that over 44% of FSWs in Kitui Town believe this to be a better practice indicates a failure of health

messaging to actively debunk this specific myth. It also suggests that FSWs, in their pursuit of maximum protection, may be adopting intuitively logical but scientifically incorrect strategies, highlighting the need for education that not only informs but also corrects prevalent falsehoods.

The moderate knowledge about protection against other STIs (Mean=3.61) compared to HIV is a well-documented phenomenon. This agrees with a study in Senegal by Diouf et al. (2020), which found that 70% of FSWs knew condoms prevented HIV, but only 40% were aware of their effectiveness against syphilis. This "HIV-centric" knowledge is a direct result of the framing of many public health campaigns, which, while necessary, can inadvertently marginalize the prevention of other STIs. This is problematic because other STIs can facilitate HIV transmission and contribute to significant long-term reproductive health morbidity. The neutral stance of 24.1% of respondents on this item suggests a lack of confidence or information, which could translate into a lower perceived severity of non-HIV STIs and thus a weaker negotiation stance for condom use with clients who are perceived as low risk for HIV.

The poor knowledge regarding the correct technique of pinching the tip (Mean=3.00) is a crucial finding that resonates with studies focusing on the discrepancy between "ever-use" and "correct use." Research in Zambia by Topp et al. (2019) and in Nairobi by Musyoki et al. (2021) also pointed out that while condom use was reported, proper steps for use were often not followed. This discussion moves beyond mere knowledge to the realm of self-efficacy and skills-based competency. Knowing that a condom should be used is different from knowing *how* to use it correctly. The low score on this technical aspect suggests that many FSWs may be using condoms in a way that compromises their effectiveness, leading to breakage, slippage, and a false sense of security. This aligns with the Health Belief Model, where self-efficacy (confidence in one's ability to perform a behavior correctly) is a key construct. Low technical knowledge directly undermines self-efficacy for correct condom use.

The knowledge landscape among FSWs in Kitui Town is characterized by a strong foundational awareness overshadowed by critical technical deficiencies. These findings strongly suggest that current educational interventions are necessary but insufficient. They effectively broadcast the "why" but fail to adequately equip FSWs with the "how" and the "what not to do." Future interventions must be more granular, incorporating practical, hands-on demonstrations that address these specific gaps—lubricant education, myth-busting around double condoms, emphasizing protection against all STIs, and reinforcing the steps for correct application. Without addressing these nuanced knowledge gaps, the high rates of general condom knowledge will continue to translate into imperfect and inconsistent protection, sustaining the cycle of HIV vulnerability in this key population.

5.0 Summary, Conclusion and Recommendation

5.1 Summary

The findings revealed a strong foundational awareness overshadowed by critical technical gaps. While knowledge about condoms preventing HIV (90.4% agreement) and pregnancy (81.2% agreement) was high, dangerous misconceptions were prevalent. A vast majority were either incorrect or uncertain about the damaging effects of oil-based lubricants on condoms, a significant portion believed the ineffective practice of "double-bagging" was beneficial, and knowledge of the correct technique of pinching the tip during application was weak. This disparity between general awareness and specific, correct knowledge represents a major vulnerability.

5.2 Conclusion

The study findings show that the general knowledge of how condoms prevent the transmission of HIV and unintended pregnancy was relatively high among female sex workers who attended the CIHEB Kenya Key Population Prevention Clinic in Kitui Town. The results also identified specific areas of condom knowledge that were lacking, such as the compatibility of the condom's lubricant, double-bagging, and correct condom-use techniques. The gaps in the general awareness indicate the lack of complete knowledge about the correct and effective use of condoms. Furthermore, statistically significant associations were found between condom use consistency and condom knowledge, perceived barriers, perception and education level, work location and income level. This means that the study indicates that the studied participants' knowledge related and selected sociodemographic factors are related to condom use consistency. However, the associations found under the current study were cross-sectional so that it is not a causal relationship. The results should not be considered as representative of all FSWs in Kitui Town and should not necessarily be extrapolated to FSWs elsewhere. Overall, the study underscores the importance of tailored health education to fill identified gaps in knowledge and ongoing monitoring and evaluation of factors linked to regular condom use among FSWs who are enrolled at the clinic.

5.3 Recommendations

Based on the findings and conclusions of this study, the following recommendations are proposed:

- i. For Policy Makers (County Government, NACC, NASCOP): Develop and formally adopt a county-level policy that decriminalizes condom possession and promotes the right to health for key populations. This should include sensitizing law enforcement agencies to prevent the harassment of FSWs for carrying condoms, thereby removing a critical structural barrier to prevention.
- ii. For Program Implementers (CIHEB-Kenya, other NGOs): Enhance existing HIV prevention programs by integrating targeted, skills-based components. This should include: a) "Beyond Basics" Training: Sessions focused explicitly on debunking myths (lubricants, double-

bagging) and demonstrating correct condom use with anatomical models. b) Advanced Negotiation Workshops: Role-playing exercises tailored to negotiating condom use with regular clients and intoxicated or aggressive clients. c) Condom Choice Programs: Pilot the distribution of a variety of condoms (e.g., ultrathin, flavored) to assess if addressing client pleasure perceptions increases use.

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