Socioeconomic Determinants of Household Access to HIV/AIDS Healthcare in Kibra Sub-County, Nairobi County, Kenya

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ABSTRACT

This study examined the impact of social and economic factors on the uptake of HIV/AIDS care in Kibra Sub County, Nairobi. The research was grounded in Behavioral theory and focused on how household income, literacy levels, and access to health information influenced the adoption of HIV/AIDS treatment. A descriptive survey design approach was employed, involving a sample of 365 households chosen through simple random and stratified sampling techniques from target population of 61,690 households, as outlined by Krejcie and Morgan's formula. Data collection was carried out using key informant interviews and self-administered questionnaires. Descriptive techniques, such as frequency and median analysis, as well as inferential techniques, such as bivariate correlation analysis, chi-square testing, and binomial logistic regression, were used. The results were displayed using tables, graphs, and percentages. Thematic analysis was also used to examine qualitative data in order to find new topics. The analysis revealed a strong positive relationship between access to health information and the likelihood of seeking treatment. Households with higher income and literacy levels were more likely to pursue HIV/AIDS care. Quantitative results showed that access to HIV-related information increased the likelihood of treatment uptake by 6.666 times. Additionally, increased household income and higher literacy levels were linked to a 7.434-fold and 3.554-fold rise, respectively, in the probability of seeking care. The study concluded that socio-economic factors, particularly income, literacy, and information access, significantly influenced healthcare-seeking behaviors in Kibra. To enhance access to HIV/AIDS treatment, it is recommended that policymakers, NGOs, and other stakeholders implement targeted interventions, including income-generating programs and comprehensive health education, to address the socio-economic barriers that hinder healthcare uptake.

Keywords: Health Information, HIV/AIDS Healthcare, Household Access, Literacy Levels, Low-Income Communities, Socio-Economic Determinants

I. INTRODUCTION

Human Immunodeficiency Virus (HIV) is a virus that reduces the immune by eradicating CD4 cells, crucial for shielding the body from infections. HIV progressively harms the immune system over time, diminishing its capacity to combat illnesses. In cases of severe immune system compromise, the condition progresses Acquired Immune Deficiency Syndrome (AIDS), the stage of HIV infection, making the body susceptible to opportune infections and certain cancers. Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) have yielded significant social economic for households over time (Sun et al. 2020). By 2021, there existed 38.4 million of HIV/AIDS globally, with higher percentage concentrated in Sub-Saharan Africa (Moyo et al. 2023). This region shoulders the largest economic burden, with 15 nations contributing to 75% of the disease's global economic impact. Notably affected nations such as Kenya, South Africa, Nigeria, and Uganda continue to grapple with the repercussions (Azevedo, 2017).

Adherence to HIV drug treatments has emerged as a global concern due to the intricate interplay of social, economic, and medical influences. Research conducted in United States by Coombs et al. (2021) underscored disparities in HIV care outcomes, revealing that factors like race, gender, and contribute to varied effectiveness in medical care delivery, and with Americans experiencing suboptimal treatment compared other demographic groups. Similarly, Wasti et al. (2023) delved into in Nepal and broader Asian, unveiling that limited healthcare access and obstacles pose significant challenges to sustaining adherence to HIV treatment, especially in remote settings characterized by scarce facilities in treatment for economically disadvantaged.

In Sub-Saharan Africa, HIV adherence rates are at an average of 72.9%, as shown by Heestermans et al. (2016). Factors such as alcohol consumption, male gender, dissatisfaction healthcare services mental, health issues like depression, and inadequate social support were identified as primary contributors to non-adherence to proper

medication. On the contrary, an intervention like counseling education was recognized to enhance adherence levels. The study suggested targeted measures to address these comprehensively, aiming to elevate adherence rates in the region.

In Kenya, a considerable number of individuals still face obstacles in accessing HIV treatment, primarily due to economic and factors. Mutua et al. (2020) highlighted that economics at the household level, including money to cover medical expenses and nutritional needs; pose significant challenges in HIV healthcare services. Additionally, low levels of literacy hinder individuals from getting essential information, thereby limiting their access to services. Language barriers, along with the pervasive stigma surrounding HIV/AIDS, deter individuals from seeking care, as they fear social ostracism or discrimination. On the contrary, Kioko & Pertet (2017) noted a notably high adherence rate 85.7% in Machakos County, surpassing the national average of 72%. This success was attributed to the beneficial impact of support groups in adherence to HIV treatment. In impoverished areas like Kibra Sub County, socio-economic difficulties such poverty impede to services, HIV treatment. In light of these challenges, it is crucial to scrutiny the local and economic determinants influencing HIV service access in Kibra. This research identified factors driving' to seek and adhere to HIV treatment in Kibra Sub County, Nairobi, Kenya. Ultimately, the findings seek to targeted interventions that can improve healthcare utilization in comparable socio-economic settings.

1.1 Statement of the Problem

Despite the current global and national movements to achieve universal health coverage (UHC) under the SDGs and Kenya Vision 2030, it remains deficient in ensuring that all the HIV related services are provided through Targeted UHC initiatives. A recent document Kenya Primary Health Care Strategic Framework (2022) appreciates the fact that while almost 75% of HIV positive persons in Kenya are on Antiretroviral Therapy (ART) but healthcare access for poor households is very poor. These challenges are further pronounced in poor regions like slums and low-income bearing the brunt of socio-economic barriers needed to access basic health care including HIV services. It further calls for increased sectoral expenditure within the benchmark of 15% of the government budget towards health sector deficit financing.

It is a beleaguered area of Kibra Sub County where very few households can reach out to HIV services. The Kibra slum has a huge percentage of the population infected with the HIV virus and is also extremely poor. Madise et al. (2012) reported 12 percent HIV rate within slums including Kibra as opposed to only 5 percent in non-slum areas based on the Kenya Demographic surveyed in 2019. There is such a radical differential which demonstrates the cause of the action that needs to be taken in order to eliminate the healthcare barriers that are currently faced by these neglected communities where other indicators of poverty like income and lack of education become exacerbators of health misinformation.

According to Muhula et al. (2021) less than 1 in 3 Kibra residents' accessed HIV healthcare services and only 14% of Kibra residents are suppressed by treatment. This leads to low adoption of the scheme that mirrors the endemic poverty of slum-dwelling household. For instance, due to low household income and low education, the probability that an individual refuse or care for a HIV treatment is lower than for those who provide with information alone. While these are studies are often covered in a general non slum areas, there has never been any dedicated research on a low-income setting such as Kibra. Given these obstacles this research intends to fill the void by exploring the socio economic factors influencing the utilization of HIV/AIDS healthcare services in households across Kibra Sub County. By making a critical analysis of these aspects the study aims at providing insights into how socio economic conditions affect access to healthcare.

1.2 Research Objectives

The study's precise objectives were to:

i. Determine how families' access to HIV information affects their ability to receive HIV/AIDS care in Kibra Sub County, Nairobi County, Kenya.
ii. Assess how household income levels affect the availability of HIV/AIDS treatment in Nairobi County, Kenya's Kibra Sub County.
iii. Investigate the effect of household literacy levels on HIV/AIDS healthcare uptake in Nairobi County, Kenya's Kibra Sub County.

II. LITERATURE REVIEW

2.1 Theoretical Review

The study was pegged on the behavioral theory which was put forward by Andersen in 1968. Andersen's version breaks down three behaviors into key components: predisposing factors, permitting elements, and need-based elements. Predisposing factors encompass demographic and social developments, similarly to personal beliefs, which have an

impact on a person's inclination to seeking out healthcare. These predisposing elements are important as they indicate how demographic inclinations, alongside training degrees in Kibra Sub County, shape human being's interest, attitudes, and behaviors in the path of HIV/AIDS healthcare offerings.

Permitting elements refer to the logistical and financial factors that might both guide or prevent the access to healthcare services such as availability of healthcare facilities, transportation, and one-of-a-type belongings. In Kibra, where a network of poverty is tremendous, allowing elements are especially critical. The Behavioral Model aids in elucidating how financial limits and insufficient healthcare infrastructure may act as important barriers to accessing HIV/AIDS treatment. For example, low income can restrict people's capability to pay for transportation to clinics or to discover the cash for treatment.

Need-based factors include the perceived and actual need for hospital treatment, which motivates humans to be searching out healthcare. In Kibra, wherein HIV/AIDS occurrence is excessive, the perceived need for remedy is expected to be remarkable. The model is useful in illustrating how people' perceptions in their health popularity especially their facts of the seriousness in their situation impact their alternatives to are seeking out sanatorium treatment and adhere to treatment protocols.

The Behavioral model is seen as a key theoretical framework because it gives a primarily based approach for reading how socio-economic and demographic factors have an impact on the usage of HIV/AIDS healthcare services in Kibra Sub County. By classifying health-seeking behaviors into predisposing, permitting, and need-based surely sincerely factors, the model offers an entire lens through which to discover the interaction of ones variables and their effect on access to healthcare. For instance, permitting elements which incorporates monetary limitations are specifically applicable on this situation, as they shed slight at the monetary limitations that save people in Kibra from getting access to HIV/AIDS treatment. This leads to the argument that addressing monetary constraints through sponsored healthcare and monetary assist is key in low-earnings areas. Furthermore, the Behavioral model emphasizes the importance of training in influencing healthcare behaviors. higher schooling degrees can bring about a greater records of HIV/AIDS remedy protocols, thereby improving remedy adherence and health consequences. This notion is mainly applicable for Kibra, wherein academic attainment is regularly constrained.

2.2 Empirical Review

2.2.1 Information Access and Uptake of Healthcare

There is much discussion about the impact of information access on uptake, particularly in light of the advent of digital era technology and communication channels. Teenagers and young adults have been using smartphones and the Internet to access health information for the past fifteen years, a fundamental increase in usage. Getting admission to healthcare facts plays a vital position inside the uptake of healthcare services, particularly with the developing have an effect on of digital era. in the united kingdom, the national fitness provider (NHS) added the countrywide fitness carrier guidelines (NHSG) app in 2019 to provide younger human beings aged 16 to 25 with dependable data on bodily and mental fitness (Campbell et al., 2019). The app covers critical health topics which include sex, relationships, and substance use, offering a convenient and private platform for young people to get right of entry to healthcare records (Maher et al., 2018). Studies display that young human beings pick using virtual fitness apps because of the privacy and autonomy they provide, specifically in addressing sensitive fitness problems (Barak & Grohol, 2017). However, the effectiveness of such apps in improving health effects remains under-researched, with most research specializing in grownup customers in place of teenagers (Majeed-Ariss et al., 2015). Within the African context, get admission to healthcare records are regularly constrained through technological and literacy boundaries, in particular in rural regions (Heestermans et al., 2016)

2.2.2Household Income Levels and Healthcare Uptake

Research across distinct countries highlights how socio-monetary factors and geography have an impact on access to healthcare information. Meyer et al. (2013) diagnosed negative health and low income as predictors of limited access to healthcare information throughout six Asia-Pacific nations, emphasizing disparities based on employment and age. In addition, Aljassim and Ostini (2020) found that literacy, wealth, and concrete-rural area significantly have an effect on healthcare information access in Tanzania, Kenya, and other African international locations, with rural regions dealing with the finest demanding situations. In Kenya, Muinga et al. (2020) discovered that hospitals frequently lack sufficient infrastructure to disseminate healthcare data correctly, mainly in informal settlements like Kibra Sub County.

Additionally, overcrowding, insufficient health facilities, and intermittent socio-economic recognition in addition impede citizens from having the ability to access and apply health statistics demonstrating the want for centered interventions to improve healthcare access in marginalized regions. The authorities is also no longer spared of this undesirable tradition, plenty in the equal route as insanity has honestly spoiled maximum people these days household incomes absolutely go through get admission to health care, when in fact they really have an effect on non-public and

collective decisions within households healthcare. Individuals with better income tiers may additionally afford more healthcare offerings; as an example, Crowley et al. (2021) reiterates the role social determinants such as profits play in reaching fitness consequences. The observation in the US by using Williams and Cooper (2020) has proven that we should tackle income-associated health inequalities via get entry to first-class fitness care. Similarly, McKee et al. (2021) highlight the surfacing health needs of the UK population, underlining the importance of adapting health services to meet these changes. This will lead to a decrease-earnings families suffer poorer fitness results, indicating that profits improvements may additionally enhance standard network fitness. Using the result of Wasti et al. (2023) in Nepal, Bangladesh and Thailand highlighted, there is evidence to state that low-income families suffer from significant healthcare access problems which suggests for governments to reduce financial barriers particularly in HIV/AIDS remedy.

As Dahab and Sakellariou (2020) research pointed out, disparities in healthcare access because of out-of-pocket charges experienced by low-income families without coverage are characteristic for Sub-Saharan Africa and display the relevance of affordability inside the context of healthcare planning. Research in West Africa by Adebisi et al. (2021) highlight similar constraints, with most countries scoring well below health priority benchmarks, indicating the necessity for policy prioritization. Financial constraints, especially the charges related to healthcare offerings and transportation, continue to preclude get admission to healthcare for economically deprived families, mainly those stricken by HIV. This is glaring in Kibra Sub County, where low socio-economic reputation limits get entry to healthcare, mainly for HIV treatment. This study targets to fill the gap in existing literature by using exploring how socio-financial elements have an effect on healthcare uptake in areas like Kibra, wherein demanding situations are especially acute due to higher HIV prevalence.

2.2.3 Literacy Levels and Healthcare Uptake

Literacy degrees play a significant role in healthcare uptake, specifically in how knowledgeable mother and father make healthcare decisions for his or her households. in line with Brunson (2013), mother and father with higher schooling tiers are much more likely to are seeking for timely medical care, even as those with decrease schooling ranges frequently hotel to conventional treatments or delay in search of clinical help. Lansford (2021) found similar traits inside the United States, where knowledgeable dad and mom not simplest have better healthcare get entry to but also revel in better profits tiers, making healthcare more inexpensive. Literacy, therefore, improves fitness-associated choice-making and promotes higher healthcare consequences. Global research reinforces this link among literacy and healthcare get entry to. Within the United Kingdom, Maniatopoulos et al. (2020) highlighted government packages aimed at supporting low-literate families, particularly the ones headed via immigrants, by providing fitness statistics and occasional-earnings coverage. In China, Li et al. (2021) pointed out the geographical disparities in fitness literacy, with the Jap regions outperforming the middle and western parts of the U.S.A but, some studies undertaking this correlation; Zajacova and Lawrence (2018) argues that literacy does now not always guarantee better health literacy, citing alarming prices of HIV among knowledgeable teachers in Sub-Saharan Africa.

2.2.4 Summary and Research Gaps

Reviewing studies like those conducted in South Africa by Dahab and Sakellariou (2020) and West Africa by Adebisi et al. (2021) showed that the problem of HIV drug access is a worldwide one that mostly affects developing nations. Comparably, a large number of studies such as those conducted in the US and in the UK as reported by Lansford (2021) and Maniatopoulos et al. (2020), respectively and Thailand by Wasti et al. (2023) were broad in scope and did not specifically examine issues in impoverished communities like Kibra. This identified a research gap that the current study seeks to address.

III. METHODOLOGY

3.1 Research Design

The descriptive approach used was appropriate for this study, as it allowed analysis of various behavior variables affecting access to healthcare services due to a range of factors with relational outcomes on human behaviors like attitudes, beliefs and household features.

3.2 Study Site

Kibra has a total population of 185,777 residents who live in 61,690 households and the average household size is 2.9 people (Kenya National Bureau of Statistics [KNBS], 2019). The Kibra Constituency is one of the 17 Sub Counties within Nairobi City County, and is among the many slum areas that exist in Kenya, where a major percentage of the citizens usually fall under low-income brackets. Residents of Kibra experience the difficulties of severe congestion, bad drainage and sewerage, security threats and lack of access to basic services namely health care and education The place is where the unpaid worker himself needs treatment yet can't get to one " you see here, there are a few conditions that challenges availability of HIV medicine and that's the reason Kibra was chosen as study zone. The high rate of HIV in this setting, alongside the socio-economic difficulties experienced by the community, make Kibra vital for analysis of health access-furthering the investigation as to whether features at household level influence healthcare provision.

3.3 Target Population and Sampling Techniques

The study was conducted among Kibra Sub-County families on antiretroviral therapy (ART). The wards namely Saran'gombe, Makina, Laini Saba and Woodley/Lindi were anticipated to experience the exercise full throttle. Saran'gombe has 28,182 constituents in total; Makina has 35,355, Laini Saba 28,182, Woodley 35,355 and Lindi 35,158 (based on Ligodiato KNBS data of 2019). The study participants were therefore drawn from families with members on HIV treatment. According to KNBS, the sample for this study was drawn from the 61,690 housing units that constitute Kibra Sub County.

Stratified random sampling was used to ensure representativeness and reduce bias in collecting questionnaire data. Households with HIV-positive individuals were identified and categorized into strata based on their engagement with HIV healthcare initiatives, with the aid of information from medical institutions and Community-Based Health Workers (CBHW). Within each stratum, households receiving HIV/AIDS treatment were selected through random sampling. To gather qualitative data, purposive sampling was applied to identify key informants such as CHWs, family heads not in the sample, government representatives, CBO leaders, and NGO staff involved in HIV/AIDS care. The study determined a sample size of 365 households using Krejcie and Morgan's (1970) formula, appropriate for a population of 61,690 households. Simple random sampling was employed to select 73 respondents from each of the five wards, reflecting their similar financial, cultural, and demographic characteristics, ensuring comprehensive coverage of eligible households receiving HIV medication.

3.4 Data Analysis and Presentation

The study employed both quantitative and qualitative data analysis methods. Quantitative data, collected through questionnaires, were analyzed using the Statistical Package for Social Sciences (SPSS) version 24. Techniques such as descriptive statistics (frequency and median analysis), bivariate correlation, chi-square tests, and binomial logistic regression were used to identify patterns and relationships, with results presented through tables, graphs, and percentages. Qualitative data were analyzed thematically, involving in-depth reading and re-reading of interview transcripts to identify recurring themes and concepts. Codes were assigned to significant textual passages, and related codes were grouped to develop overarching themes. This process was iterative, with ongoing refinement to ensure themes accurately represented the data. The integration of quantitative and qualitative approaches provided a comprehensive understanding of the research questions by combining numerical insights with detailed personal experiences, thereby offering a multi-dimensional view of the factors affecting healthcare access for individuals with HIV/AIDS.

IV. FINDINGS & DISCUSSION

4.1 Demographic Attributes of the Respondents

The study examining social and economic factors influencing household uptake of HIV/AIDS healthcare in Kibra Sub County, Nairobi, uncovered a variety of demographic insights. With a high response rate of 95.9% (350 out of 365 distributed questionnaires), the sample size was deemed sufficient for analysis, well above the 70% benchmark. The research tool was reliable, as indicated by Cronbach's Alpha values above 0.7, confirming consistency in the data collected. The gender breakdown was nearly even, with 52% female and 48% male respondents, reflecting the typical gender distribution seen in similar sub-Saharan communities. Regarding marital status, the majority of participants (29.1%) were divorced, followed by singles (28.3%), married individuals (22.6%), and others (20%), indicating a significant portion of respondents were not in stable marital relationships, which could influence their socioeconomic challenges.

In terms of HIV medication use, 66% of respondents had been on treatment for more than three years, reflecting consistent access to healthcare services. The study also revealed that 43.4% of respondents lived in households with 4-5 people, while 32.9% were in households with over five members, which could pose challenges in terms of healthcare access and resource distribution. In terms of employment, 56.6% of respondents were engaged in informal work, 22.8% in formal employment, and 12% were unemployed. This highlights the financial hardships faced by individuals living with HIV/AIDS, especially those without stable employment, as they struggle to secure both their livelihoods and consistent healthcare.

4.1.1 Rating Access to Information and Uptake of HIV/AIDS Healthcare

The respondents were asked to rate how much they agreed with the statement that a household's decision to participate in HIV healthcare is based on the information set it has about the program. Table 1, shows that (30%) agree, 26% strongly agree, 21% were neutral, 13% disagree, and finally 10% strongly disagree. The consistency between the study's findings and Heestermans et al. (2016) work reveals the pivotal role that information access plays in determining the uptake of HIV/AIDS healthcare. By understanding this relationship, researchers and policymakers can develop targeted interventions that address informational barriers, improve technology access, and promote literacy, ultimately leading to increased participation in HIV/AIDS healthcare programs in Kibra. This, in turn, can contribute to better health outcomes and a reduction in HIV/AIDS-related stigma and misinformation.

Table 1

Access to Information and Uptake of HIV/AIDS Healthcare

Statement	5	4	3	2	1	Median
Taking part in HIV healthcare by household is determined by information set it has about the healthcare program.	26%	30%	21%	13%	10%	4
Decision to take part in HIV healthcare program is influenced by access to information about its benefits.	32%	27%	24%	12%	5%	4
Information access is not necessary in terms of HIV healthcare access.	28%	28%	22%	15%	7%	4
Households with Poor or inadequate information tend to show low uptake of HIV healthcare.	31%	26%	14%	18%	11%	4
Level of information is important in initiating and making a decision to seek HIV/AIDS healthcare.	28%	26%	14%	15%	17%	4

One of the key informants said;

> *"People primarily rely on healthcare facilities, community health workers, and educational campaigns for information. The information is somewhat adequate, but there is room for improvement in terms of accessibility and comprehensiveness. This information empowers individuals to make informed decisions about their healthcare, including when and where to seek treatment"* (Respondent 007).

The passage emphasizes that while residents of Kibra Sub County have some access to information about HIV/AIDS medications, efforts must be intensified to ensure the target audience fully accesses it. This aligns with the survey data, which shows a positive correlation between access to information and the likelihood of utilizing healthcare services. To enhance healthcare adoption, strategies should focus on improving the dissemination of accurate and comprehensive information through healthcare facilities, community health workers, and educational programs. The results support previous research on the determinants of healthcare information conducted by Aljassim and Ostini (2020). The study identified a number of disparities as the primary determinants of access to healthcare information, including wealth, location (rural vs. urban), and literacy levels. It also suggested expanding access to healthcare information for those living in marginalized and rural areas as well as developing targeted interventions for low-income households. This would significantly improve everyone's access to information, irrespective of social or economic circumstances.

The respondents were also asked to rate how much they agreed with the statement that knowing the benefits of an HIV healthcare program influences a person's decision to enroll in it. The results, shown in Table 1, show that the majority (32%) strongly agrees, 27% agree, 24% were neutral, 12% disagree, and 5% strongly disagree. According to the study's findings, access to knowledge about the advantages of HIV healthcare programs influences the decision of 59% of respondents to agree or strongly agree with this statement. This study finding is consistent with a study by Brunson (2013) in which it was established that most individuals who were educated were likely to take part in HIV healthcare program due high chance of them accessing information about its benefits.

One of the key informants said;

> *"As someone deeply involved in Kibra Sub County, it's evident that our community recognizes the impact of having information about the benefits of HIV healthcare. Many of us agree and stress on the importance*

of accessing information especially this time of social media which has made it easy and individuals are now informed on choices about their health" (Respondent 010).

The passage above indicates that while many respondents accessed a significant amount of information on HIV/AIDS medication, there remains a need to ensure accessibility for all intended recipients. Respondents also emphasized the importance of information access. This aligns with questionnaire data showing that the availability of information influences decisions regarding enrollment in HIV healthcare programs. Respondents were also asked to indicate their agreement with the statement that access to information is crucial for receiving HIV healthcare. Table 1 illustrates that a majority of respondents 56% strongly agreed or agreed with this statement, while 22% were neutral, 15% disagreed, and 7% strongly disagreed. The study's findings suggest that information access is essential beyond just HIV healthcare. One of the key informants said;

"Nowadays we can access any information such as health information through social media platforms but our challenge is that many of us do not have smartphones or no internet in our houses" (Respondent 007)

The respondents were also queried about their agreement with the statement indicating that households with limited or insufficient information tend to exhibit low uptake of HIV healthcare. The findings, displayed in Table 1, reveal that the largest proportion of respondents 31%, strongly agreed with this statement. Additionally, 26% agreed, 18% disagreed, 14% were neutral, and 11% strongly disagreed. According to the study's findings, 57% of respondents agree or strongly agree that households with little or no information typically have low rates of HIV healthcare uptake. The results align with Meyer et al. (2013) study, which found that households with limited or insufficient information typically have low HIV healthcare uptake. Additionally, the study demonstrated that the lowest levels of access were intended for people who work in households; part-timers; retirees; and elderly people who have trouble accessing information. This study differs with the current one because this deals with informal settlements, particularly in Nairobi and it examines how the socio-economic status affects the uptake of HIV medication.

One of the key informants said;

"Of course, we sometimes fail to go for our medication and guidance and counseling because we do not get information on time due to the nature of the slum setup and poor level of communication in the slum" (Respondent 004)

The respondents were also asked to rate their agreement with the statement that getting the right information is crucial when starting the process of deciding whether or not to seek HIV/AIDS healthcare. The results, which are shown in Table 1, indicate that the majority of respondents (28%) strongly agree, 26% agree, 17% strongly disagree, 15% disagree, and 4% were neutral. According to the study's findings, 54% of respondents either agree or strongly agree that having access to adequate information is crucial when deciding whether to seek HIV/AIDS treatment.

One of key informants said;

"Since most of us depend on healthcare facilities, community health workers, and educational campaigns as the main sources of information, we are not likely to know other platforms to get information concerning our health matters and that may have affected most of us in making decisions" (Respondent 007).

The provided passage underscores the presence of available information on HIV/AIDS medicine however; it highlights the imperative for additional efforts in facilitating how the targeted population can access this information. This observation resonates with the positive correlation identified in the questionnaire data and early research indicating that improved access to information associates with an increased likelihood of healthcare utilization.

4.1.2 Assessing the Impact of Household Income on Access to HIV Healthcare

The respondents were asked to rate the influence of household income on access to HIV related healthcare on a scale from 1 to 5. The results, which are shown in Table 2, indicate that the majority (31%) agree, 29% strongly agree, 20% disagree, 10% were neutral, and 10% strongly disagree. Overall, 60 percent of respondents generally agreed or strongly agreed (arithmetic median = 4) that costs/costing is often the major driver behind decisions about which HIV treatment to support/ adopt. Most economically powerless households won't have normal get entry to either personal or public delivery, making it tough for women and children to attend clinic appointments, bring domestic medicinal drug or are seeking emergency care.

This can bring about not noted appointments, not on time remedy, and common poorer health consequences. Affording antiretroviral remedy (art) and different HIV/AIDS-associated medicines can be a massive assignment for low-earnings households. Even when healthcare offerings are available, the charge of medication can be a deterrent, most important to non-compliance or incomplete treatment regimens. Economic constraints often imply that low-profits families are placed in regions with lots less evolved healthcare infrastructure. Families in Kibra may also prioritize simple wishes which include meals, safe haven, and training over healthcare fees. While income is confined, the functionality to have enough money healthcare offerings will become compromised. This is direct hyperlink amongst quality of living and healthcare affordability results in a robust perception of income's function in healthcare selections.

In many slums, medical insurance exposure is very low or non-existent. This leads to families carrying the general liability of diverse HIV associated healthcare costs, which in most cases can be devastating for low income slum dwelling people.

Economically poor households regularly encounter a cycle of economic insufficiency and awful suitability, where by restricted financial assets cause an inadequate healthcare, which sequentially worsens financial tasks. Conducting qualitative studies, together with interviews or interest organizations, can offer deeper information of the lived studies of low-profits households. This can display particular boundaries and coping techniques related to healthcare get admission to. The robust correlation among profits and healthcare access shows a want for rules that cope with economic boundaries. This could include subsidizing transport, providing free or low-cost medicines and improving health care facilities in poor income areas. Coming across network-primarily based answers to mitigate economic limitations can play a major position in improving healthcare access. Those may additionally encompass community health applications, cellular clinics or partnerships with neighborhood NGOs to support low-income families. One of the key informants said;

> *"Not all households have equal access, and income levels play a significant role in determining access. Lower-income households face barriers such as transportation costs and affordability of other medications, which hinder their access"* (Respondent 001)

The excerpt above highlights the fact that there is currently a cost associated with obtaining HIV/AIDS medication, which influences the decision to seek and use HIV healthcare. This is consistent with the positive correlation observed in the questionnaire data, indicating that respondents are more likely to utilize healthcare services if they have better access to financial resources.

Table 2

Household Income Levels and Utilization of HIV/AIDS Healthcare

Statement	5	4	3	2	1	Median
Decision to which HIV healthcare is sought and used is often based upon related cost and expenses.	29%	31%	10%	20%	10%	4
Affordability is one of the important reasons for taking up HIV healthcare explaining why many households fail to attend HIV health care services as is required.	37%	29%	15%	13%	6%	4
Income levels have nothing to do with access to HIV medication.	15%	7%	20%	28%	30%	3
Low-income level is linked to unmet needs and poor access to HIV healthcare.	37%	26%	13%	19%	5%	4
People from high income levels are associated with higher HIV healthcare uptake compared to those from lower income levels.	40%	29%	12%	15%	4%	4

To comprehend why many households fail to adhere to HIV healthcare services as recommended, respondents were asked to indicate their agreement level with the statement that affordability is a significant factor in seeking HIV healthcare. According to Table 2, the majority of respondents (37%) strongly agree, with another 29% in agreement, 15% neutral, 13% disagreeing, and 6% strongly disagreeing. The study reveals that 66% of respondents agreed or strongly agreed that cost serves as a primary barrier to accessing HIV healthcare, contributing to inadequate visits to HIV clinics by many households. This finding aligns with Dahab and Sakellariou (2020) study, which highlighted disparities in healthcare access among households, particularly noting that 28% were from low-income backgrounds.

"The access to HIV/AIDS healthcare requires a lot of income to some extent, as healthcare costs can be a burden for lower-income individuals" (Respondent 001).

The passage indicates that both survey respondents and key informants agree that financial constraints are a significant reason why many households with HIV-infected individuals fail to meet the minimum requirements for accessing healthcare services as needed. This aligns well with Bronfenbrenner's Social Economic Status Theory, which highlights the impact that an individual's socioeconomic status (e.g., income and occupation) has on their ability to obtain necessary resources in this case healthcare. This study has demonstrated the severity of financial constraint as an impediment to meeting requisite conditions for healthcare access in HIV affected households. These might be transportation to the hospital expenses, medical bills and other indirect healthcare costs.

Given the constrained financial resources available to these households, this unfortunately limits their access to preventative care and exposure to health education programs which compounds pre-existing health disparities. These results highlight the importance of intentional interventions and policies directed towards removing financial obstacles for disenfranchised groups in order to promote not only equitable healthcare access but quality health care available for all persons, regardless of their level of socioeconomic disadvantage. Meanwhile, the respondents were also asked how far they agree with the statement "the economic levels are not associated to access to HIV medication".

As shown in Table 2, majority (30%) of participants strongly disagreed with debarment, 28% disagreed, 20% were neutral/unconcerned about the idea and only 15% ultimately agreed/strongly agreed. The survey results revealed that 58% of respondents disagreed or strongly disagreed that access to HIV medication has nothing to do with income and wealth.

According to the results shown in Table 2, the majority (37%) highly agrees, 26% agree, 19% disagree, 13% are neutral, and 5% strongly disagree. According to the study's findings, 63% of respondents agreed or strongly agreed that there is a connection between low income and unmet requirements as well as limited access to HIV healthcare.

One of the key informants said;

"Most of us we do not go for medical check regularly because the checkups need money so we are torn apart on either buying food or medical checkups but it is obvious we must buy food instead" (Respondent 005).

Key informants acknowledge that income levels have a substantial impact on access to HIV/AIDS healthcare, and that not all households have equal access to it. This validates the results of the questionnaire, which show that households with higher incomes have higher rates of healthcare utilization. Interventions aimed at reducing the financial burden of healthcare costs should focus on lower-income households in order to alleviate this discrepancy. This can be achieved by offering financial support or subsidies. The results support previous research by Dahab and Sakellariou (2020) on the standard of care in Kenyan healthcare facilities, which found that compared to patients who attend non-voucher facilities, over 4 out of 5 voucher holders were seen within 48 hours and received care within the first 48 hours. This was due to the fact that using non-voucher facilities was more costly for them than they could not meet the cost.

In addition, the respondents were asked to rank how much they agreed with the claim that greater income levels are linked to higher rates of HIV healthcare uptake than lower income levels. Table 2 presents the findings, which show that 40% of respondents strongly agree, 29% agree, 15% disagree, 12% are neutral, and 4% strongly disagree. According to the study's findings, 69% of respondents agreed or strongly agreed that persons with greater incomes are more likely than those with lower incomes to receive HIV healthcare.

One of the key informants said;

"For those of us with money in our neighborhood are usually going for their routine medicine on time and are eating well. By the way they look healthier than us" (Respondent 008).

In a similar vein, key informants acknowledge that financial resources play a significant influence in determining a household's ability to access HIV/AIDS healthcare. This is consistent with the information from the questionnaire. Having a little extra money makes you more inclined to use healthcare services. The results corroborate Warren's (2015) findings regarding the quality of healthcare in Kenya, wherein people with health insurance coverage attended more medical check-ups than those without.

4.1.3 Assessing the Impact of Household Literacy Levels on Access to HIV Healthcare

Respondents were asked to indicate their agreement with the statement that a household's ability to access HIV healthcare is affected by its literacy levels. Majority (35%) strongly agreed, 31% agreed, 15% disagreed, 12% were neutral, and 7% strongly disagreed. According to the study's findings, with a median score of 4, 66% of respondents agreed or strongly agreed that households with higher literacy levels tend to use healthcare services more effectively. This study's outcomes align with research by Brunson (2013), which highlighted that more educated parents tend to seek medical care promptly compared to less educated parents who may prefer traditional remedies or home care. One of the key informants said;

> *"Literacy is beneficial because it enables individuals to better understand healthcare information and follow treatment plans. Literacy allows individuals to comprehend healthcare instructions, adhere to medication schedules, and engage in preventive measures effectively therefore to ensure that more people in the community have literacy when it comes to HIV/AIDS healthcare uptake, community-based education programs and partnerships with local schools need to be established to improve health literacy, making healthcare information more accessible"* (Respondent 006).

The passage above emphasizes how access to HIV/AIDS medications is influenced by literacy levels, which in turn influences the decision of whether to seek and use HIV healthcare. This supports the positive correlation discovered in the survey data, indicating that respondents are more likely to use healthcare if they have greater literacy levels.

Table 3

Household Literacy Levels and Utilization of HIV/AIDS Healthcare

Statement	5	4	3	2	1	Median
Household with high literacy levels are associated with higher healthcare uptake	35%	31%	12%	15%	7%	4
Literacy levels determine individuals' awareness on better health decision	38%	30%	14%	12%	6%	4
Low literate households exhibit inability to access HIV/AID related information presented in print form.	36%	31%	14%	12%	7%	4
Literacy levels determines users' capabilities to read labels/ instructions for HIV medications and related safety advices	39%	28%	11%	14%	8%	4
Households with low literacy tend to be hesitant to take part in HIV healthcare.	40%	31%	11%	11%	7%	4

In addition, the respondents were asked to rank how much they agreed with the claim that literacy levels influence people's knowledge of how to make better health decisions. According to Table 3's findings, the majority of respondents (38%) strongly agree, followed by 30% who agree, 14% who were neutral, 12% who disagree, and 6% who strongly disagree. According to the study's findings, 68% of respondents agreed or strongly agreed that a person's reading level affects their awareness of how to make healthier decisions. The results of this survey are in line with a study by Maniatopoulos et al. (2020), which found a substantial correlation between educational attainment and attitudes and knowledge about healthcare. The study also showed that having more education undoubtedly aids in appreciating the educational messages such as the need to benefit a family member for healthcare.

One of the key informants said;

> *"Effective access to HIV/AIDS healthcare needs one to have knowledge in reading and understanding, as most of the medicine's instructions are in English"* (Respondent 009).

The aforementioned excerpt demonstrates that both the key informant and questionnaire respondents concur that there is a clear correlation between educational attainment and healthcare-related knowledge and attitudes. In addition, the respondents were asked to score how much they agreed with the claim that households with low levels of literacy are unable to obtain print versions of HIV/AIDS-related materials. Table 3 presents the findings, which show that 36% of respondents strongly disagree, 31% disagree, 14% were neutral, 12% strongly agree, and 7% agreed with the statement. The results of the study show that 67% of respondents strongly agree or agree that households with low levels of literacy are unable to obtain print versions of HIV/AIDS-related information. The results of this study are in line with statistics from Kenya's Ministry of Education (MOE) from 2018, which show that fewer people in the Arid and Semi-Arid Lands (ASAL) regions have access to education. Thus, parents' decisions about healthcare, including HIV, may be influenced by their educational attainment.

One of the key informants said;

> *"Someone like me sometimes I wish I was able to understand what is needed for medical uptake or understand what my diet requires. My education level is low and sometimes I need someone to direct me"* (Respondent 010).

The aforementioned passage demonstrates that both the key informant and questionnaire respondents believe there is a strong correlation between households with poor levels of literacy and their inability to obtain print versions of HIV/AIDS-related materials. The respondents were also asked to rate the extent to which users' literacy levels influences their ability to read HIV medicine labels, instructions, and relevant safety recommendations. According to the results shown in Table 3, the majority (39%) highly agrees, 28% agree, 14% disagree, 11% were neutral, and 8% strongly disagree. According to the study's findings, 67% of respondents agreed or strongly agreed that users' literacy levels affect their ability to interpret HIV medicine labels, instructions, and related safety information. The results of this study are in line with those of Li et al. (2021), who demonstrated that low literacy is a significant public health issue due to its correlation with worse health outcomes, higher rates of hospital admission, and poorer self-management.

One of the key informants said;

> *"Some of us are not well educated and thus this hinders our capability to read and understand the instructions as directed by doctors. Sometimes this leads to overdose or under dose* (Respondent" 011).

Key informants admit that a lack of education among certain respondents has impacted their ability to interpret HIV medicine labels, instructions, and related safety warnings. This validates the results of the questionnaire, which show that people with greater levels of education are more likely to be able to comprehend the labels and instructions on HIV drugs as well as any associated safety information. In addition, the respondents were asked to score how much they agreed with the statement that households with poor literacy levels are less likely to participate in HIV healthcare. The results shown in Table 3 show that the majority (40%) highly agree, followed by 31% who agree, 11% who disagree, 11% who are neutral, and 7% who strongly disagree. According to the study's findings, 71% of respondents concur that households with lower levels of literacy are less likely to participate in HIV care.

One of the key informants said;

"Due to our low understanding of medical issues, we sometimes fear going for medical checkups and this has led to high stigma. We need more seminars and forums to understand HIV healthcare and stigma elimination" (Respondent 004).

Key informants also acknowledge that households with poor literacy levels often exhibit reluctance to participate in HIV healthcare. This matches the results of the questionnaire. You are more likely to be reluctant to participate in HIV healthcare if you have a poor level of education. The results corroborate Brunson's (2013) theory, according to which parents choose the types and timing of health care services that their families receive. A parent's decision to visit a healthcare institution is influenced by a variety of factors, one of which is their educational background.

4.2 Inferential Statistics

The study categorized the dependent variable, uptake of HIV/AIDS healthcare, into two nominal categories: yes and no. Binomial logistic analysis was applied to fit the model, as indicated in Table 4 below.

Table 4

Parameter Estimates Regarding the Influence of Social and Economic factors on the Adoption of HIV/AIDS Healthcare

		B	df	Sig.	Exp(B)
Model 1	HIV information access	1.897	1	.022	6.666
	Household income levels	2.006	1	.010	7.434
	Household literacy levels	1.268	1	.023	3.554
	Constant	1.089	1	.000	2.971

The parameter estimates from Table 4 indicate significant positive effects of several social and economic determinants on the uptake of HIV/AIDS healthcare. Access to HIV information showed a statistically significant influence (coefficient: 1.897, p-value: 0.022 < 0.05), suggesting that households with access to knowledge about HIV were 6.666 times more likely to adopt HIV/AIDS healthcare. Similarly, household income levels also had a significant positive impact (coefficient: 2.006, p-value: 0.010 < 0.05), indicating that higher income levels increased the likelihood of healthcare uptake by 7.434 times. Household literacy levels were found to positively influence uptake as well (coefficient: 1.268, p-value: 0.0 < 0.05), with a beta sign of 1.268, indicating a 3.554-fold increase in the likelihood of adopting HIV/AIDS healthcare. Additionally, the constant value (coefficient: 1.089, p-value: 0.0 < 0.05) suggests that besides these factors in this study, there are other significant contributors positively affecting healthcare adoption, with a beta sign of 1.089, corresponding to a 2.971-fold increase in likelihood of adopting HIV/AIDS healthcare.

4.3 Discussion

The logistic regression results clearly demonstrate the significant impact that social and economic factors, such as access to HIV information, household income, and literacy levels, have on the uptake of HIV/AIDS healthcare. Households that have access to accurate HIV information, enjoy higher income levels, and demonstrate greater literacy are more likely to seek HIV healthcare services. These findings align with prior research, which emphasizes the critical role these factors play in healthcare utilization. This study emphasizes the necessity of addressing these social and economic factors through specific measures, such as enhancing community-based education programs, increasing access to HIV-related healthcare information, and providing financial assistance to households with lower incomes. Improving access to accurate healthcare information is crucial for empowering communities to make informed decisions about their health.

The positive association between these factors and healthcare engagement underlines the importance of targeted efforts, particularly in regions with lower literacy rates and reduced economic opportunities. For instance, initiatives aimed at promoting health literacy, coupled with efforts to disseminate HIV information in multiple languages and accessible formats, and could significantly improve healthcare access and outcomes. Similarly, economic empowerment programs that address financial barriers would enable more households to access essential healthcare services. This research adds valuable insights into how household-level factors influence healthcare decisions and suggests actionable strategies for expanding access to HIV/AIDS healthcare, particularly in areas with limited resources. By addressing these determinants, healthcare policymakers and practitioners can help improve overall health outcomes in underserved communities.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

This study emphasizes the crucial role of access to information in influencing healthcare behaviors among those affected by HIV/AIDS in Kibra Sub County. Key findings include:

Individuals who have better access to accurate information often disseminated through community health workers and awareness initiatives are significantly more likely to seek and utilize healthcare services. This highlights the need for sustained public education efforts regarding HIV/AIDS. The study found that households with higher income levels tend to utilize healthcare services more frequently. Addressing financial inequalities and fostering economic stability in Kibra could enhance equitable access to essential healthcare resources. Higher literacy rates within households are associated with a greater likelihood of seeking medical care. This indicates a pressing need for continued investment in health education and literacy improvement programs within the community.

5.2 Recommendations

Building Partnerships (This includes: More collaboration among city leaders, NGOs and local government to promote public awareness and education campaigns). Set up mobile clinics: Establish trucks or vans that functioning as a hospital on wheel equipped with information, resources and materials to inform the local population. Support economic initiatives: The project will work to promote income-generating activities particularly through micro entrepreneurship by proper vocational training thus providing financial stability. Improve Health Literacy: Invest in health literacy programs combining basic literacy and health education.

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