ORIGINAL RESEARCH ARTICLE

# Health system barriers to accessing depression care among HIV/AIDS patients in Juja Sub-County, Kiambu county, Kenya.

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## Abstract

Depression is a common comorbidity among HIV/AIDS patients, adversely affecting adherence to medication and health outcomes. However, barriers to accessing depression care in resource-limited settings remain poorly understood. This study aimed to identify health system barriers to providing depression care for HIV/AIDS patients in Juja Sub-County, Kenya, based on clinicians' perspectives. A cross-sectional qualitative study was conducted in Juja Sub-County, focusing on the six comprehensive care centers (CCC) in the region. Key informant interviews (KII) were carried out with six clinicians, purposively selected for their direct involvement in HIV/AIDS care. Data were collected using a semi-structured interview guide and analyzed thematically, guided by the World Health Organization's six building blocks of the health system. Thematic analysis revealed barriers across all the building blocks of a health system. Primarily, there is limited capacity to provide depression services at all facilities as only screening and referral services are available. There is also an acute shortage of mental health professionals [4]with only one psychiatric nurse in the Sub-County. Also, there is lack of monitoring and evaluation of the quality of depression care provided. Another access barrier was a lack of medication for the treatment of depression. Clinicians reported that their capacity is limited to screening and referral. Also, our study found that funding for mental health was inadequate; similarly, there was a lack of any dedicated financial resources for the care of mental health within HIV/AIDS programs. Health system barriers to accessing depression care for HIV/AIDS patients in Juja Sub-County are multifaceted, affecting all six building blocks. Strengthening these areas through integrated service delivery, capacity building, enhanced resource allocation, and policy reforms is essential to improving access to depression care and health outcomes for HIV/AIDS patients.


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**Keywords:** HIV/AIDS, Depression, Healthcare Access, Health Systems, Kenya

## 1.0 Introduction

Depression in persons living with HIV/AIDS (PLWHA) is a serious public health issue, and prevalence rates worldwide vary from 12.8% to 78%, much higher than 3-17% in the general population (Uthman et al., 2017). In sub-Saharan Africa, where there is a disproportionately high HIV/AIDS burden, research has shown that between 6% to 59% of PLWHA suffer from depressive symptoms (Mwangala et al., 2021). In Kenya, the problem is especially alarming, with 32.2% of PLWHA experiencing symptoms of clinically significant depression (Ng'ang'a et al., 2018). The high prevalence of depression among PLWHA is especially notable given its association with a 42% reduced probability of having optimal antiretroviral therapy (ART) adherence required for viral suppression and overall health outcomes (Rivera-Picón et al., 2023).

Kenya, having a 4.3% adult HIV prevalence (around 1.4 million adults), faces considerable challenges in meeting the WHO's mental health needs of PLWHA (The National Syndemic Diseases Control Council (NSDCC), 2022). Although the burden of depression is high, access to mental health services is still a challenge. Systemic barriers, such as extreme mental health professional shortages and mental health underfunding, exacerbate this treatment gap. For example, Kenya only has 0.19 mental health professionals per 100,000 population, much lower than the World Health Organization (WHO) suggested ratio of 10 per 100,000 (Kumar et al., 2022). Additionally, mental health receives less than 2% of the total national health budget, which constrains the ability to provide integrated care for PLWHA (Ndung'u & Bíró, 2024).

The study was conducted in Juja Sub-County, Kiambu County, Kenya. Adopting the WHO's six building blocks, the study investigates health system barriers to depression care access among PLWHA. By examining these barriers, this research aims to produce evidence-based information for strengthening the incorporation of mental health care within HIV programs in resource-limited settings. The findings are expected to inform policy and practice, with the aim of informing the development of targeted interventions that promote increased access to depression care for PLWHA, resulting in improved overall health outcomes and quality of life.

## 2.0 Methods

### 2.1 Study design

A qualitative study design was used. Key informant interviews (KIIs) were conducted to assess the barriers within the healthcare system that prevent HIV/AIDS patients from accessing depression care services in Juja Sub-County, Kiambu County, Kenya. Qualitative analysis was adopted, considering its ability to investigate clinicians' experiences, observations, and perceptions in practice in CCCs. Qualitative analysis is best suited to eliciting information about the nuance of access barriers in the health system and contextual factors influencing access to depression care.


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## 2.2 Study setting and population

The study was conducted in Juja Sub-County, Kiambu County, Kenya. Although sub-county-level data are limited, existing data from Kiambu County provide a strong basis for the selection of this location. According to a 2022 report, the prevalence of HIV in Kiambu County among individuals aged 15 years and above is 2.3% (The National Syndemic Diseases Control Council (NSDCC), 2022). The county also bears a high mental illness burden. In 2020, Kiambu ranked third in the nation in cases of mental illness reported, at 4,793 cases (The Kenya National Bureau of Statistics, 2020). Additionally, the highest tier facility in the sub-county is level 3, which is not equipped to provide comprehensive depression care services (Kiambu County Government, 2025). The participants were clinicians (n=6) working in the selected health facilities. Six facilities were selected for this study including Gachororo Health Centre, Kalimoni Mission Hospital, JKUAT Hospital, Juja Farm Health Center, Hamundia Health Centre, and GSU Dispensary. These facilities were selected because they are the only public health facilities with active comprehensive care centers. Clinicians were purposefully selected for the study based on their roles in providing care for HIV/AIDS patients. The inclusion of participants in the selection involved (1) being a clinician (clinical officer or a nurse) with at least one year of work experience in the CCC and (2) direct care for HIV/AIDS patients.

## 2.3 Data collection procedures

Data collection was done using semi-structured KII. The principal investigator conducted the KIIs face-to-face with clinicians at respective facilities. The interview guide consisted of 20 open-ended questions organized into six themes based on the World Health Organization's six building blocks of the health system. Each interview lasted approximately 20 to 30 minutes (Stockton et al., 2021). With participants' permission, the interviews were recorded and were only accessible to the principal investigator. Six KII were conducted involving one clinician from each of the six facilities.

## 2.4 Data analysis

Nvivo 14 was used for data analysis. The audio-recorded interviews were transcribed verbatim and anonymized to ensure confidentiality. The data were analyzed using thematic analysis focused on six themes guided by the WHOs six essential components of a health system including health financing, service delivery, leadership and governance, the healthcare workforce, medical supplies, vaccines and technology, and health information systems (Doshmangir et al., 2025). The thematic analysis was guided by the six-phase guide provided by (Braun & Clarke, 2006), which includes familiarizing with the codes, generating initial codes, searching for themes (pre-defined themes were used), reviewing themes, defining themes, and making the write-up (Byrne, 2022).

# 3.0 Results

## 3.1 Participant details

6 participants were recruited from the selected healthcare facilities. 33.3% of the participants were male and 66.7% female. 1(16.7%) of the participants have worked for less than 5 years,


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3(50%) have worked for between 5 to 10 years, and 2 (33.3%) have worked for more than 10 years. Table 1.

*Table 1. Participants' background.*

| Characteristics | Full sample | |
|---|---|---|
| | Frequency | Percent |
| Gender | | |
| Male | 2 | 33.3 |
| Female | 4 | 66.7 |
| Years of Experience | | |
| Less than 5 years | 1 | 16.7 |
| 5-10 years | 3 | 50 |
| More than 10 years | 2 | 33.3 |

*Note*: All variables are summarized as frequencies (n) and percent (%).

The six pillars of a healthcare system were used the main themes.

*Table 2: Themes and Sub-Themes*

| Main Themes (Health System Pillars). | Sub-themes. |
|---|---|
| Service Delivery. | Integrated screening. |
| | Routine screening for new patients. |
| | Needs-based screening for continuing patients. |
| | Referral system for moderate to severe cases. |
| Health Workforce. | Shortage of specialized mental health staff. |
| | Limited number of screening-capable staff. |
| | Training gaps for CCC clinicians. |
| | Overwhelmed psychiatric services. |
| Health Information System | Use of KenyaEMR for data management. |
| | Integration of depression data with HIV/AIDS records. |
| | Monitoring and evaluation gaps. |
| Medical Products, Vaccines, and Technologies. | Lack of on-site depression medications. |
| | Limited capacity to medical intervention. |
| | Reliance on referral for treatment. |
| Health System Financing. | Inadequate funding. |
| | Lack of dedicated resources for mental health |
| Leadership and Governance | Gaps in local implementation of policies. |
| | Lack of clear guidelines for integrated care. |


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### 3.2 Health system barriers to accessing depression care services

The barriers identified include;

i. Limited capacity to offer depression services. The facilities only provide screening and referral services.

" *Our services are limited to screening. For medical interventions, we must refer patients to other healthcare facilities.*" *(KII 1)*

*"We do screen patients for depressive symptoms during routine consultations, but beyond that, we lack the resources for proper management." (KII 2)*

*"We recognize the mental health needs of our patients, but our facility does not have the specialized staff or infrastructure to offer comprehensive depression treatment. Once we identify a case, we can only refer them to a county hospital or a mental health specialist." (KII 3)*

ii. Lack of mental health specialists, with only one psychiatric nurse serving all six facilities. 60% of the facilities have only one health worker capable of offering depression screening and referral.

" *The sub-county faces a challenge as only one psychiatric nurse serves all six facilities.*" *(KII 1)*

*"Patients in need of mental health care often face delays due to the absence of an on-site dedicated professional. With a single psychiatric nurse serving all six facilities, timely depression management remains highly challenging." (KII 2)*

iii. Depression-related information is stored in the KenyaEMR system. However, there is a lack of real-time data analysis or reporting, delaying proactive depression care management. Additionally, there is no system for monitoring and evaluating the quality of depression care.

"*Health information on depression is stored in the KenyaEMR. Although we have the KenyaEMR system that integrates depression data with HIV/AIDS records, we lack real-time data analysis or reporting features, which hinder proactive depression care management*." *(KII 1)*

*"The PHQ-9 depression screening tool is integrated into the KenyaEMR system. The information automatically gets captured in KenyaEMR when a patient is screened. We cannot, however, view information on patient treatment and recovery because we do not offer treatment for depression." (KII 2)*

*"Depression screening data are collected in KenyaEMR, but reporting systems do not exist to track and measure quality of care." (KII 3)*

*"We screen and refer patients with depression. It is not easy to follow-up in terms of treatment, though, since psychiatric intervention is not mainstreamed in the CCC." (KII 4)*

*"Although the PHQ-9 survey is available in KenyaEMR, there is no established system for monitoring and evaluating depression care for patients." (KII 5)*

*"We screen depression with PHQ-9, and the data are stored in KenyaEMR, but there is no monitoring and evaluation system." (KII 6)*


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iv. The facilities lack medications for depression treatment.
"*We do not have any medications for depression. We only screen and refer patients.*" (KII 1)

v. Lack of mental health financial resources for HIV/AIDS programs and inadequate funding.
*" There are no mental health funds specifically, since most of the funds cover testing kits and antiretroviral treatment." (KII 1)*
"*Mental health services, especially for HIV patients, are often underfunded, resulting in limited resources for care." (KII 2)*
*"There is no funding allocated specifically for mental health within HIV/AIDS programs." (KII 4)*

vi. Gaps in local policies or guidelines specifically addressing depression care in HIV/AIDS patients. Challenges in implementing existing national policies at the local level.
*"Although national policies and guidelines exist, implementing them at our level is challenging due to resource limitations and the absence of clear local policies." (KII 1)*
*"While national policies recognize the need for integrating mental health into HIV care, there is no structured framework at the sub-county level. We lack clear guidelines on how to operationalize depression management within our facilities." (KII 2)*
*"While national-level policies exist, enforcing them at the sub-county level is challenging due to the lack of specific guidelines. Additionally, insufficient clinician training in the CCC hampers the integration of mental health into routine HIV care." (KII 3)*

## 4.0 Discussion

Our qualitative study identifies a range of systemic barriers in the health system that prevent depression care access among HIV/AIDS patients receiving comprehensive care in public health facilities within the Juja Sub-County. The relatively low facility capacity to deliver comprehensive depression care is among the main findings, with all facilities only offering screening and referral. This is compounded by a severe lack of mental health professionals, as indicated by the fact that one psychiatric nurse serves all six institutions in the Sub-County. These findings support recent research documenting the global shortage of mental health professionals, particularly in low-resource settings. The findings were consistent with one study that reported that an insufficient number of psychiatrists and psychologists in sub-Saharan Africa limits treating the growing epidemic of depression among vulnerable groups such as those living with HIV/AIDS (Wainberg et al., 2017). Moreover, another study reported that the lack of appropriately trained mental health professionals remains a key barrier to the treatment of depression, particularly in regions with elevated HIV prevalence, where mental health needs are increasing (Poku et al., 2023). Similarly, a different study concluded that there was an insufficient number of psychiatrists and psychologists to whom providers could refer cases of depression (Bartels et al., 2021). Another study reported that a major barrier to securing treatment for depression among people with HIV/AIDS is the lack of adequately trained mental health specialists, a problem compounded by rising demand due to growing mental health needs (Ezeanolue et al., 2020).


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Another significant barrier identified in our study is the lack of real-time analysis and reporting of data, together with inadequate monitoring and evaluation of the quality of depression care. This is supported by one study which reported the dearth of mental health registries and data systems as a principal challenge to excellent follow-up and continuity of care within low- and middle-income countries (LMICs) (Keynejad et al., 2018). Without robust data systems, patient outcomes are hard to track, resources are wasted, and evidence-based interventions cannot be implemented. Another study reported that the absence of any specific register regarding mental health records prevents effective follow-up and continuity of care (Wakida et al., 2019).

Shortages of depression medication exacerbate the access barriers. The clinicians indicated that their work is limited to screening and referral due to the lack of essential psychotropic medications. This is not unique to our study area, Greene et al. (2021) have indicated that antidepressants and other psychiatric drug stockouts are common in LMICs, undermining efforts to provide timely and effective interventions. Our findings also indicate that there are no allocated financial funds channeled into mental health services under HIV/AIDS programs and that mental health services are significantly underfunded. This aligns with Olashore et al. (2021) who identified underfunding as a primary barrier to scaling up mental health care in low-resource settings. Similarly, another study pointed out that incorporation of mental health care within HIV programs remains a low priority even though depression and HIV/AIDS co-occur at high levels (Conteh et al., 2023). Various studies concurred with these findings by highlighting underfunding as a major barrier to access to mental health care (Carbonell et al., 2020; Chibanda et al., 2020; Wakida et al., 2019).

Moreover, our research revealed difficulties in translating established national policies into practice at the grassroots level. Even if policies exist, their enactment into practice is typically foiled by systemic inefficiencies, lack of proper funding, and absence of trained professionals. This was in agreement with Petersen et al. (2017) who reported that the policy-practice gap remains a common refrain in global mental health, particularly in LMICs whose already overburdened health systems are struggling. Closing this gap requires additional funding and improved governance, capacity building, and community engagement to ensure that policies are effectively implemented (Moloi et al., 2023).

## 5.0 Conclusion

This research identified the complex barriers to accessing depression care within the HIV/AIDS program setting, such as a severe lack of mental health care providers, inadequate health information systems, shortages of medication, and insufficient financing. The discrepancy between national mental health policies and local implementation exacerbates them. These barriers can be addressed by using an approach that involves the expansion of the mental health workforce, enhancing information systems, guaranteed regular availability of medicines, and more financial investment in mental health care. Further, integration of mental health care into the


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already established HIV/AIDS programs is a necessity to deal with the overwhelming burden of depression among this vulnerable segment of people. By giving priority to such interventions, both policymakers and clinicians can significantly decrease the treatment gap for depression as well as enhance the general quality of life among people with HIV/AIDS. Future studies must be aimed at quantifying such interventions' effectiveness and developing novel care provision models in resource-scarce environments.

## 6.0 Acknowledgement.

### 6.1 Conflict of interest

None.

### 6.2 Ethical considerations

The JKUAT Institutional Ethics Review Committee approved the study with reference number JKU/ISERC/02317/1343. Approval of conducting the study was obtained from the National Commission for Science, Technology & Innovation (NACOSTI) under license number NACOSTI/P/24/37288. Approval was also sought from Kiambu County reference: KIAMBU/HRDU/AUTHO/KEMBOI N. A. Approval was also sought from each facility before data collection. Participants provided verbal consent before taking part in the study. Confidentiality was guaranteed while collecting data. The signed consent forms were stored securely and only accessible by the principal investigator. The study participants had no direct benefits, which was well captured in the informed consent form.

### 6.3 Funding

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## 7.0 References

Bartels, S. M., Cardenas, P., Uribe-Restrepo, J. M., Cubillos, L., Torrey, W. C., Castro, S. M., Williams, M. J., Oviedo-Manrique, D. G., Gómez-Restrepo, C., & Marsch, L. A. (2021). Barriers and facilitators to the diagnosis and treatment of depression in primary care in Colombia: Perspectives of providers, healthcare administrators, patients and community representatives. *Revista Colombiana de Psiquiatría (English Ed.)*, *50*, 64–72. https://doi.org/10.1016/j.rcpeng.2021.01.001

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Byrne, D. (2022). A worked example of Braun and Clarke's approach to reflexive thematic analysis. *Quality & Quantity*, *56*(3), 1391–1412. https://doi.org/10.1007/s11135-021-01182-y

Carbonell, Á., Navarro-Pérez, J., & Mestre, M. (2020). Challenges and barriers in mental healthcare systems and their impact on the family: A systematic integrative review. *Health & Social Care in the Community*, *28*(5), 1366–1379. https://doi.org/10.1111/hsc.12968

Chibanda, D., Abas, M., Musesengwa, R., Merritt, C., Sorsdahl, K., Mangezi, W., Bandawe, C., Cowan, F., Araya, R., Gomo, E., Gibson, L., Weiss, H., Hanlon, C., & Lund, C. (2020). Mental health research capacity building in sub-Saharan Africa: the African Mental Health Research Initiative. *Global Mental Health*, *7*, e8. https://doi.org/10.1017/gmh.2019.32

Conteh, N. K., Latona, A., & Mahomed, O. (2023). Mapping the effectiveness of integrating mental health in HIV programs: a scoping review. *BMC Health Services Research*, *23*(1), 396. https://doi.org/10.1186/s12913-023-09359-x

Doshmangir, L., Sanadghol, A., Kakemam, E., & Majdzadeh, R. (2025). The involvement of non-governmental organisations in achieving health system goals based on the WHO six building blocks: A scoping review on global evidence. *PLOS ONE*, *20*(1), e0315592. https://doi.org/10.1371/journal.pone.0315592

Ezeanolue, E. E., Iheanacho, T., Adedeji, I. A., Itanyi, I. U., Olakunde, B., Patel, D., Dakum, P., Okonkwo, P., Akinmurele, T., Obiefune, M., Khamofu, H., Oyeledun, B., Aina, M., Eyo, A., Oleribe, O., Oko, J., Olutola, A., Gobir, I., Aliyu, M. H., … Sturke, R. (2020). Opportunities and challenges to integrating mental health into HIV programs in a low- and middle-income country: insights from the Nigeria implementation science Alliance. *BMC Health Services Research*, *20*(1), 904. https://doi.org/10.1186/s12913-020-05750-0

Greene, M. C., Huang, T. T. K., Giusto, A., Lovero, K. L., Stockton, M. A., Shelton, R. C., dos Santos, P., Saúte, F., & Wainberg, M. L. (2021). Leveraging Systems Science to Promote the Implementation and Sustainability of Mental Health and Psychosocial Interventions in Low- and Middle-Income Countries. *Harvard Review of Psychiatry*, *29*(4), 262–277. https://doi.org/10.1097/HRP.0000000000000306

Keynejad, R. C., Dua, T., Barbui, C., & Thornicroft, G. (2018). WHO Mental Health Gap Action Programme (mhGAP) Intervention Guide: a systematic review of evidence from low and middle-income countries. *Evidence Based Mental Health*, *21*(1), 30–34. https://doi.org/10.1136/eb-2017-102750

Kiambu County Government. (2025). *Health Services – Kiambu County Government*. https://doi.org/https://kiambu.go.ke/departments/health-services/

Kumar, M., Macharia, P., Nyongesa, V., Kathono, J., Yator, O., Mwaniga, S., McKay, M., Huang, K. Y., Shidhaye, R., Njuguna, S., & Saxena, S. (2022). Human-centered design exploration with Kenyan health workers on proposed digital mental health screening and intervention training development: Thematic analysis of user preferences and needs. *DIGITAL HEALTH*, *8*, 205520762210900. https://doi.org/10.1177/20552076221090035

Moloi, H., Daniels, K., Brooke-Sumner, C., Cooper, S., Odendaal, W. A., Thorne, M., Akama, E., & Leon, N. (2023). Healthcare workers' perceptions and experiences of primary healthcare integration: a scoping review of qualitative evidence. *Cochrane Database of Systematic Reviews*, *2023*(7). https://doi.org/10.1002/14651858.CD013603.pub3

Mwangala, P. N., Mabrouk, A., Wagner, R., Newton, C. R. J. C., & Abubakar, A. A. (2021). Mental health and well-being of older adults living with HIV in sub-Saharan Africa: a systematic review. *BMJ Open*, *11*(9). https://doi.org/10.1136/BMJOPEN-2021-052810


ISSN 1561-7645 (online)
doi: 10.4314/jagst.v24i2.5

Ndung'u, J. G., & Bíró, É. (2024). Evaluating the impact of financial worry on mental health: a cross-sectional study among Kenyan radiographers. *BMC Public Health*, *24*(1), 3354. https://doi.org/10.1186/s12889-024-20863-5

Ng'ang'a, P. W., Mathai, M., Obondo, A., Mutavi, T., & Kumar, M. (2018). Undetected psychiatric morbidity among HIV/AIDS patients attending Comprehensive Care Clinic (CCC) in Nairobi Kenya: towards an integrated mental health care. *Annals of General Psychiatry*, *17*(1). https://doi.org/10.1186/S12991-018-0179-1

Olashore, A. A., Paruk, S., Akanni, O. O., Tomita, A., & Chiliza, B. (2021). Psychiatric Disorders in Adolescents Living with HIV and Association with Antiretroviral Therapy Adherence in Sub-Saharan Africa: A Systematic Review and Meta-analysis. *AIDS and Behavior*, *25*(6), 1711–1728. https://doi.org/10.1007/s10461-020-03100-z

Petersen, I., Marais, D., Abdulmalik, J., Ahuja, S., Alem, A., Chisholm, D., Egbe, C., Gureje, O., Hanlon, C., Lund, C., Shidhaye, R., Jordans, M., Kigozi, F., Mugisha, J., Upadhaya, N., & Thornicroft, G. (2017). Strengthening mental health system governance in six low- and middle-income countries in Africa and South Asia: challenges, needs and potential strategies. *Health Policy and Planning*, *32*(5), 699–709. https://doi.org/10.1093/heapol/czx014

Poku, O. B., West, N. S., Eschliman, E. L., Dangerfield, D. T., Bass, J., Kennedy, C. E., & Murray, S. M. (2023). Mental Health Problems Across the HIV Care Continuum for Adolescents Living with HIV in Sub-Saharan Africa: A Scoping Review. *AIDS and Behavior*, *27*(8), 2548–2565. https://doi.org/10.1007/s10461-023-03981-w

Rivera-Picón, C., Benavente-Cuesta, M., Quevedo-Aguado, M., Sánchez-González, J., & Rodríguez-Muñoz, P. (2023). Factors Associated with Adherence to Treatment in Patients with HIV and Diabetes Mellitus. *Journal of Personalized Medicine*, *13*(2), 269. https://doi.org/10.3390/jpm13020269

Stockton, D. A., Fowler, C., Debono, D., & Travaglia, J. (2021). World Health Organization building blocks in rural community health services: An integrative review. *Health Science Reports*, *4*(2). https://doi.org/10.1002/hsr2.254

The Kenya National Bureau of Statistics. (2020). *Kenya National Bureau of Statistics - Kenya's Top Data Site*. https://www.knbs.or.ke/

The National Syndemic Diseases Control Council (NSDCC). (2022). *THE STATE OF HIV PREVENTION*. https://nsdcc.go.ke/wp-content/uploads/2023/04/County-HIV-Posters_2022

Uthman, O. A., Magidson, J. F., Safren, S. A., & Nachega, J. B. (2017). Depression and Adherence to Antiretroviral Therapy in Low-, Middle- and High-Income Countries: A Systematic Review and Meta-Analysis. *Current HIV/AIDS Reports*, *11*(3), 291–307. https://doi.org/10.1007/s11904-014-0220-1

Wainberg, M. L., Scorza, P., Shultz, J. M., Helpman, L., Mootz, J. J., Johnson, K. A., Neria, Y., Bradford, J.-M. E., Oquendo, M. A., & Arbuckle, M. R. (2017). Challenges and Opportunities in Global Mental Health: a Research-to-Practice Perspective. *Current Psychiatry Reports*, *19*(5), 28. https://doi.org/10.1007/s11920-017-0780-z


ISSN 1561-7645 (online)
doi: 10.4314/jagst.v24i2.5

Wakida, E. K., Okello, E. S., Rukundo, G. Z., Akena, D., Alele, P. E., Talib, Z. M., & Obua, C. (2019). Health system constraints in integrating mental health services into primary healthcare in rural Uganda: perspectives of primary care providers. *International Journal of Mental Health Systems*, *13*(1), 16. https://doi.org/10.1186/s13033-019-0272-0


ISSN 1561-7645 (online)
doi: 10.4314/jagst.v24i2.5