

ORIGINAL ARTICLE

Utilization of Primary Mental Health Services by adolescents in Kitwe District, Zambia

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ABSTRACT

Background: The utilization of primary mental health services remains low in Zambia, particularly in Kitwe, despite the government's efforts to increase access. Adolescents are especially underrepresented among those seeking these services. The low utilization of primary mental health services stems from the knowledge of adolescents, perceived stigma and low resource availability. While other studies have explored utilization of these services in other settings this study provides a comprehensive examination among adolescents in Kitwe.

Objective: To investigate the factors contributing to the utilization of primary mental health services among adolescents in Kitwe District.

Methods: A quantitative, cross-sectional, non-interventional research design was used. Simple random sampling ensured fair representation, with a total of 191 adolescent respondents who had

accessed mental health services at Kitwe Teaching Hospital.

Results: The study comprised of 60.7%(116) males and 39.3%(75) females. All the respondents were aged between 10- 19 years of age unmarried and unemployed. 45(%) of the respondents indicated they had substance use disorders. 20 (40) of the total respondents had utilized primary mental health services of all the respondents in this study. The study revealed that lack of awareness, limited resources, and stigma were significant barriers to utilization of primary services. That 45.5(%) of adolescents had low knowledge about primary mental health services. The study also found an association between substance use and the likelihood of seeking mental health services. Adolescents who used substances were more likely to seek services than those in the reference category, as indicated by a beta coefficient, β of 6.06, and a p-value below .001 with an odds ratio ($\text{Exp}(\beta)$) of 428.5.

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Further knowledge was also a significant factor in predicting the utilization of mental health services ($p = 0.01$). Individuals with low knowledge are substantially less likely to seek mental health services as reflected by a negative beta coefficient, β of -3.95, and an odds ratio of 0.02, with a p -value below .001. Resource availability was another significant determinant in the utilization of mental health services ($\beta = 3.16$, $p = 0.01$), with an odds ratio of 23.6. Low resource levels were reported by 57.1(%) in the survey. This reflects a significant gap in the availability of mental health services. Moreover, the study revealed that a substantial majority of adolescents, 63.4(%), perceive stigma to be associated with mental health

Conclusion: Despite integration efforts, primary mental health service utilization among adolescents in Kitwe remains low. Enhancing knowledge, addressing stigma, and improving resource availability are essential to increasing uptake.

INTRODUCTION

Mental health disorders are significant disturbances in cognition, emotion regulation, or behaviour, often caused by psychological, biological, or developmental dysfunctions.¹ These conditions affect around 970 million people globally, with a 12.4% prevalence rate,² including depression, anxiety, psychosis, and substance abuse. In Africa, the burden is worsened by conflict, poverty, food insecurity, and diseases like HIV/AIDS. Despite this, mental health remains underfunded and overlooked by governments and international organizations. Mental disorders are the fifth most common non-communicable disease in Sub-Saharan Africa, with unclear sustainable funding sources through aid, government budgets, or partnerships.

In Zambia, mental health conditions affect about 20% of the population (approximately 3.7 million people), with depression and substance abuse being the most prevalent disorders.³ These issues are often linked to stigma, discrimination, poverty, and high unemployment.⁴ Adolescents are particularly at risk,

with around 882,000 affected, representing one in ten in Sub-Saharan Africa.^{5, 6, 7} Zambia is a signatory to global mental health frameworks, including the WHO Comprehensive Mental Health Action Plan (2013–2020) and the Special Initiative for Mental Health (2019–2023). Government efforts include integrating services, upgrading hospitals, and providing mental health training for healthcare providers.

Adolescent-specific mental health services, including treatment, emotional regulation training, and life skills development, are provided through schools, community centres, and public health initiatives. Primary mental health care plays a vital role in early detection, intervention, and stigma reduction. Despite these efforts, service utilization among adolescents in urban areas like Kitwe remains low due to stigma, limited awareness, poor accessibility, and weak community support. Addressing these barriers is essential to improving adolescent mental health outcomes. Although Zambia supports international strategies like the WHO Action Plan (2013–2020) and the African Union Health Strategy (2016–2030), adolescent service uptake remains inadequate. The WHO Mental Health Atlas reports only 0.26 community-based outpatient facilities per 100,000 people in medium-income countries, serving all age groups. Only 1.73% of adolescents with mental health conditions access services in schools or communities, largely due to poor policy implementation and limited resources.^{8, 9} Globally, 23.2% of children and adolescents with mental disorders live in Sub-Saharan Africa,¹⁰ yet weak data systems likely understate the burden. In Kitwe, this underutilization reflects regional trends, underscoring the need for research into contributing factors.

The study highlighted the importance of adolescent mental health for national development, noting its impact on future well-being and productivity. Despite global efforts, mental health among adolescents is often overlooked, especially in low- and middle-income countries like Zambia.

Researchers pointed out that the absence of a dedicated child and adolescent mental health policy contributes to low service utilization. The study aims to prioritize adolescent mental health, inform policy, enhance service delivery, and promote cross-sector collaboration, supporting Zambia's alignment with Sustainable Development Goals 3.4 and 3.8.

While existing literature has explored utilization in various contexts, there is a scarcity of Zambia-specific data on the utilization of primary mental health services by adolescents, particularly in low-resource countries like Zambia where healthcare systems are already strained. Furthermore, while some studies have explored utilization in the context of health care professionals, few have examined the unique socio-cultural and systemic factors that shape utilization by adolescents in Zambia, such as community perception, resource limitations, and the role of insurance schemes in influencing service utilization.

This study aims to fill these gaps by providing Zambia-specific data on the levels of utilization by adolescents in Kitwe. By focusing on the knowledge of adolescents on mental health services, stigma and availability of resources. The study highlights on the unique challenges faced by adolescents in a low-resource setting. Furthermore, it explores the tertiary mental health services offered them. Understanding these dynamics is essential for developing targeted interventions to support adolescents, improve public health outcomes, and inform evidence-based policies for combatting adolescents' mental health issues

METHODOLOGY

Design

A cross-sectional, non-interventional study conducted in 2024 involving 191 participants was conducted to explore factors influencing adolescents' use of primary mental health services.

Sample size and sampling

The sample size was calculated using Krejcie and Morgan's formula for estimating population size. The target population consisted of adolescents from Kitwe Teaching Hospital, and a 10% non-response rate was added, resulting in a total sample size of two hundred and twenty-eight (228). Of these, two hundred (200) participants responded, with one hundred and ninety-one (191) fully completing the questionnaires.

Simple random sampling using the lottery method was employed to select participants, in order to avoid selection bias.

Inclusion Criteria

The inclusion criteria for this study were all the adolescents who:

1. Had suffered from any mental illness for more than three months.
2. Had received treatment for more than three months at KTH
3. Were present at the time of study and consent to participate in the study.

Exclusion Criteria

Clinically unwell adolescents posed a risk of harm to themselves and others.

Data collection

Data were collected from adolescents who had been receiving treatment at Kitwe Teaching Hospital for over three months. The questionnaire was adapted from a combination of items drawn from the Mental Health Literacy Questionnaire for Young Adults, the Stigma Scale, and the Health Care Service Utilisation Questionnaire. The language was simplified, and culturally specific items were modified to suit the target population. The adapted questionnaire was translated into Bemba and reviewed by UNZABREC. It was further pre-tested through a pilot study.

Ethical clearance

The study adhered to international ethical standards, including the principles outlined in the Declaration of Helsinki. Ethical clearance and permission to conduct the research were obtained from the University of Zambia Biomedical Research Ethics Committee, the National Health Research Authority, the Copperbelt Provincial Health Office, and the Kitwe Teaching Hospital Research Committee (Reference numbers: 4697-2023, NHRA1127/16/04/2024, and PHO/CB/2/17/1). Consent was sought from the parents, and assent from the adolescents. Confidentiality and anonymity were assured to all participants. They were also informed that participation was voluntary and that they were free to withdraw from the study at any point of their choosing.

RESULTS

Table 1: Socio-demographic characteristics (n=191)

CHARACTERISTIC	FREQUENCY	PERCENTAGE
SEX		
Males	116	60.7%
Females	75	39.3%
AGE		
10-14yrs	10	5.2%
15-19 yrs.	181	95%
MARITAL STATUS		
Single	191	100%
Married	0	0%
Divorced	0	0%
Widowed	0	0%F
LEVEL OF EDUCATION		
Primary	0	0%
Secondary	183	95.8%
Tertiary	7	3.7%
None	2	1.5%
OCCUPATION		
Working	0	0%
Unemployed	191	100%
TOTAL	191	100
CONDITION		
Substance use	86	45%
Depression	59	30.9 %
Others	46	24.08
TOTAL	191	100

Table 1 shows that 60.7% (116) were male, 39.3% (75) female, with 95% (181) aged 15-19. All respondents were single, 95.8% in secondary school, 45% (86) reported substance use, 30.9% (59) depression.

Table 2: Knowledge of adolescents on mental health services

	Strongly agree	agree	Neutral	disagree	Strongly disagree
n=(191)					
Aware of mental health services.	25(13%)	4(2%)	36(19%)	77(37%)	50(26%)
Received information on services.	4(2%)	6(3%)	19(10%)	38(20%)	124(65%)
Access to mental health services.	5(3%)	34(18%)	38(20%)	57(30%)	58(30%)
Stigma, cost, and resources affect service use.	57(30%)	85(45%)	13(7%)	23(3%)	12(6%)

Table 2 above shows that 63% were unaware of services, 85% received no information, 60% didn't access services, and 75% cited stigma, cost, and resources as barriers.

Table 3: Resources availability for primary mental health services.

	Strongly agree	agree	Neutral	Strongly disagree	Strongly disagree
n=(191)					
tailored services	131(69%)	24(13%)	15(8%)	13(7%)	8(4%)
Medications	5(3%)	10(5%)	19(10%)	42(22%)	115(60%)
peer educators	19(10%)	10(5%)	38(20%)	67(35%)	57(30%)
feedback mechanism	15(8%)	23(12%)	48(25%)	57(30%)	48(48%)

The table 3 showed that 81% of respondents reported a lack of adolescent-specific services, 82% noted

unavailable medications, 65% cited no peer educators, and 55% mentioned no feedback mechanisms.

Table 4: Experienced or perceived stigma

n=(191)	Strongly agree	agree	Neutral	Disagree	Strongly disagree
Self-stigma a barrier	131(69%)	24(13%)	15(13%)	13(7%)	8(4%)
stigma affect treatment and health seeking behaviours	131(69%)	24(13%)	15(13%)	13(7%)	8(4%)
interaction with friend	149(78%)	31(16%)	6(3%)	2(4%)	1(1%)
witnessed stigma from health care professionals	13(7%)	10(5%)	19(10%)	48(25%)	101(53%)

The table 4 above shows that 81% of respondents reported self-stigma and stigma from others hinder service use, 94% said stigma affects social interactions, and 78% never faced stigma from healthcare providers.

Table 5: Utilization of primary mental health services

n=(191)	Strongly agree	agree	Neutral	Disagree	Strongly disagree
NHIMA affect your utilization	118(61%)	67(35%)	4(2%)	1(1%)	1(1%)
Used primary mental health services	17(9%)	23(12%)	19(10%)	24(14%)	105(55%)
encourage your relative to use primary mental health service (n=40)	5(12%)	8(3%)	2(5%)	20(50%)	10(25%)
satisfaction (n=40)	2(5%)	3(8%)	5(12.5%)	8(20%)	22(55%)

The table 5 shows 96% of respondents felt NHIMA influenced mental health service use, while 65% hadn't sought services, and 75% wouldn't recommend them due to dissatisfaction.

PERCEIVED FACTORS INFLUENCING MENTAL HEALTH SERVICE UTILIZATION

Table 6: Adolescents' Knowledge, Perceptions of Stigma, and Views on Resource Availability for Primary Mental Health Services in Kitwe District (n=191)

Variable		Frequency (n)	Percent (%)
Knowledge	Low	87	45.5
	Moderate	42	22.0
	High	62	32.5
	Total	191	100.0
Stigma	No	70	36.6
	Yes	121	63.4
	Total	191	100.0
Resource Availability	No	109	57.1
	Yes	82	42.9
	Total	191	100.0

Table 6 shows 45.5% had low knowledge, 57.1% felt resources were insufficient, and 63.4% experienced stigma about using mental health services.

Predictors of Mental Health Service utilization among adolescents

Table 7: Output from the binary logistic regression analysis

Variable	B	Wald	Df	Sig.	Exp(β)	95% C.I. for EXP(β)	
						Lower	Upper
Gender	0.13	0.02	1	0.887	1.13	0.20	6.41
Condition		14.1	2	0.001			
Depression	1.10	0.65	1	0.421	3.01	0.21	43.75
Substance use	6.07	12.0	1	0.001	431.9	13.9	13421.0
Knowledge		9.09	2	0.011			
Knowledge (1)	-3.96	8.35	1	0.004	0.02	0.00	0.28
Knowledge (2)	-1.87	2.09	1	0.148	0.15	0.01	1.95
Stigma	-4.11	7.32	1	0.007	0.02	0.00	0.32
Resource availability	3.16	6.09	1	0.014	23.6	1.92	290.6
Constant	0.27	0.01	1	0.907	1.30		

Table 7 shows substance use significantly increases service use ($\beta = 6.06$, $p < 0.001$, OR = 428.5). Low knowledge ($\beta = -3.95$, $p < 0.001$, OR = 0.02) and resource availability ($\beta = 3.16$, $p = 0.01$, OR = 23.6) also impact utilization.

DISCUSSION

Gender distribution, educational and employment status of adolescents

The study gathered socio-demographic data to understand adolescent characteristics. Results showed that 60.7% were male and 39.3% female, highlighting male adolescents' underrepresentation in health research. This greater male participation may reflect a tendency towards externalizing behaviours such as substance misuse often linked to conditions like depression and anxiety. All participants were single and unemployed, reflecting broader socio-economic vulnerabilities. According to ZDHS, 63% of Zambian youth aged 15–24 are NEET (not in employment, education, or training), which increases the risk of poverty and mental health challenges.^{10, 11} It's recommended that

targeted mental health interventions should be developed to address the specific needs of unemployed and NEET youth, particularly adolescent males, who may be more prone to externalizing behaviours. Government and NGOs should implement community-based programs that integrate mental health services with vocational training. Additionally, policies that incentivize youth employment and education especially for those at risk of social exclusion are critical to mitigating long-term mental health issues.

Further research is needed to explore gender-specific patterns in mental health and behavioural outcomes among adolescents, particularly focussing on why male adolescents might be over represented in certain risk categories.

Longitudinal studies examining the impact of NEET status on mental health trajectories could inform more intervention strategies. Moreover, including more female participants in future studies would help balance insights and support more inclusive youth mental health policies.

Commonly reported condition

Substance misuse was reported by 45% of respondents. Studies found that 15–25% of adolescents regularly use substances, which is linked to increased susceptibility to mental illness.¹²

¹³ This highlights the need for increased attention to be paid to substance use as it contributes to the development of co-occurring mental health conditions such as anxiety and depression. Policymakers should prioritize the incorporation of substance use prevention and treatment programs within existing adolescent mental health services. Schools, health facilities, and community centres should be equipped with resources to offer early screening, education, and counselling for substance misuse. A national adolescent substance use strategy that includes awareness campaigns, peer support models, and family-based interventions would strengthen early prevention and reduce long-term mental health burdens.

Further research is needed to identify the underlying drivers of high substance misuse among adolescents in Zambia, predominantly in relation to mental health, poverty, and social stressors. Mixed-methods studies that explore youth perceptions on substance use can provide valuable insights for culturally appropriate and youth-centred interventions. Furthermore, evaluating the efficiency of current prevention and treatment models in local contexts would help refine future programming and policy design.

Knowledge of Adolescents on Mental Health Services

Awareness of adolescents on primary mental health services

The findings of the study reveal that a significant proportion of adolescents (45.5%) in Zambia possess low knowledge regarding mental health services. This aligns with broader trends across Sub-Saharan Africa, where mental health literacy remains low due to limited access to mental health education.¹⁸ In Zambia, this knowledge gap is exacerbated by inadequate training among educators and caregivers, hindering the early identification of mental health issues.¹⁹ To address this gap, the Zambian government, in collaboration with education and health sectors, should implement school-based mental health education programs that promote awareness, reduce stigma, and empower adolescents to seek help. Capacity building initiatives must also target teachers, caregivers, and frontline health workers by integrating mental health training into professional development programs. Increasing the availability of youth-friendly mental health services particularly in schools and health centres settings will help bridge the knowledge-to-access gap.

Further research must investigate the most effective approaches to enhancing mental health literacy among adolescents in Zambia, including culturally sensitive education strategies and peer-led interventions. Evaluating the impact of teacher and caregiver mental health training programs on adolescent outcomes could inform scalable models for early detection and referral. Moreover, qualitative research exploring adolescents' perceptions of mental health and service accessibility would provide critical insight into reducing stigma and improving engagement.

Mental health education

Consequently, there is a pressing need for targeted mental health education programs to raise awareness and enhance recognition of mental health conditions among adolescents. A study supports this assertion, emphasizing that school-based interventions can effectively reduce stigma and encourage adolescents to seek help when experiencing psychological distress. Increased knowledge not only helps in

symptom recognition but also fosters help-seeking behaviour.²⁰ This is echoed by work that found a strong correlation between mental health literacy and service utilization among adolescents.²¹ This study indicated that those with higher awareness levels were more likely to identify symptoms and access services, suggesting that knowledge empowers adolescents to seek support. These findings underscore the importance of implementing targeted mental health education programs that can improve knowledge and awareness among adolescents. Therefore, the government should issue a statutory instrument directing all health agencies to allocate 1% of their total health budget to mental health services in line with WHO.

In line with WHO recommendations, the Zambian government should issue a statutory instrument mandating that all public health agencies allocate at least 1% of their total health budget to mental health services. A portion of this funding should be dedicated specifically to adolescent mental health education initiatives within schools, communities, and digital platforms. These programs should be age-appropriate, culturally sensitive, and co-designed with youth to ensure relevance and engagement. Furthermore, mental health literacy should be formally integrated into the national school curriculum to promote early understanding and de-stigmatization. Future research should assess the long-term impact of school-based mental health education on stigma reduction, help-seeking behaviours, and service uptake. Comparative studies evaluating the effectiveness of different mental health education models such as peer-led programs, teacher-facilitated sessions, and digital interventions will help identify scalable and cost-effective approaches. Additionally, monitoring how budget allocations to mental health services influence service availability and adolescent outcomes can guide future policy decisions.

Further reinforcing this perspective, researchers highlighted the role of school mental health programs in enhancing students' willingness to access mental health resources. Both studies also

emphasized the influence of stigma and how increased literacy can help adolescents overcome the fear of judgment from peers or family.²² A Zambia-based study, similarly observed that low mental health knowledge was a significant barrier to service utilization and that school-based education could improve health-seeking behaviour. Government should establish feedback mechanism among schools, youth centres and primary health care facilities.²³ In addition, a formal feedback mechanism should be established to connect schools, youth centres, and primary health care facilities. This system would allow students to share concerns, receive guidance, and be referred appropriately. By integrating education with supportive services and ensuring two-way communication, such an approach can reduce stigma, improve literacy, and promote early intervention. It's needed to evaluate the effectiveness of integrated school-health system referral models in promoting mental health among adolescents. Specifically, studies should examine how formal communication pathways between schools and health services influence utilization, referral uptake, and long-term mental health outcomes. Action research and pilot studies in diverse school settings urban and rural can inform accessible frameworks for nationwide implementation and identify barriers to integration and continuity of care.

However, contrasting views exist that knowledge alone does not significantly predict service utilization among adolescents.²⁴ This study found that despite adequate awareness, many adolescents did not act on their knowledge due to other factors, such as stigma, accessibility issues, and insufficient peer and family support. A further study noted that perceived barriers, such as fear of judgment and distrust in mental health systems, often outweighed the benefits of knowledge.²⁵ This suggests that literacy must be paired with supportive environments and accessible services. Further research should investigate the combined effect of mental health literacy, stigma reduction, and

community support structures on actual service utilization among adolescents. Mixed-methods studies could provide insights into the social and cultural barriers that prevent youth from seeking care, even when they are aware of mental health issues. Evaluating community-based, family-inclusive models will be essential in identifying best practices for creating safe, trusted, and effective care pathways that move beyond awareness to real-world impact.

Exposure to success stories

Another critical finding of the study is the limited exposure adolescents have to information on successful treatment outcomes. About 85% of respondents reported not having received any information about primary mental health services. This lack of awareness contributes significantly to low service utilization. Positive narratives of recovery can counteract the stigma and encourage engagement. **Meyer *et al.*** found that how recovery stories are portrayed in the media influences adolescent attitudes and help-seeking behaviour.²⁶ It was further observed that exposure to such stories positively impacts adolescent engagement with mental health services.²⁷ **Patton** cautioned that success stories alone are insufficient, as factors such as socioeconomic status and family support also heavily influence utilization rates.²⁸ Lastly, the study findings resonate with those of **Foster *et al.***, who identified a lack of awareness as a key barrier to mental health service utilization in Ghana, particularly in culturally sensitive environments where misinformation about mental health prevails.²⁹ Additional research could help on the impact of success stories in utilization of mental health services in different social standings.

It is recommended that the Ministry of Health partner with media outlets, schools, and community organizations to disseminate culturally sensitive, youth-centred recovery stories through radio, social media, and school programs. These stories should be complemented by accurate information on available services to counter misinformation and encourage

utilization of primary mental health services. Additionally, targeted messaging should account for differences in socioeconomic status and family dynamics, as these significantly influence service utilization. Further research is also needed to evaluate the effectiveness of recovery narratives across diverse adolescent populations.

Stigma and Mental Health Service Utilisation

Stigma remains a major barrier, with 63.4% of adolescents reporting stigmatization from family, peers, or the community. Cultural and religious beliefs often frame mental illness as a moral or spiritual issue, discouraging open discussion and access to care.^{30,31,32} Further, stigma from close social groups leads to isolation and worsens mental health conditions. Self-stigma and societal stigma were reported by 85% and 84% of participants respectively, significantly hindering help-seeking behaviour.^{33, 34} This supports the findings of the **Carter *et al.*** (35), which reported delays in seeking care due to fear of stigma.³⁵ Another study found that financial constraints and a preference for traditional healing limited adolescents' engagement with formal services.³⁶ The findings indicate that there is a need to generate information on the effect of parental, peer, or familial support in overcoming stigma.

Further research is needed to explore how familial, peer, and community dynamics shape adolescent perceptions of mental health and influence utilization. Qualitative studies can provide deeper insights into stigma's root causes and identify culturally appropriate intervention points.

However, some studies have highlighted that strong parental support can help adolescents overcome stigma and seek care.³⁷ These insights highlight the importance of community-based anti-stigma initiatives. Such programs delivered through schools, media, and families can enhance adolescent mental health outcomes. The findings emphasize the urgent need for culturally relevant interventions that address stigma and improve service awareness.

Furthermore, the need for anti-stigma campaigns to encourage more adolescents to seek help.

It is recommended that the government, in collaboration with civil society and education stakeholders, implement culturally relevant mental health awareness campaigns. These should be delivered through schools, media platforms, and family-centred programs to challenge stigma, increase mental health literacy, and encourage adolescents.

Further research is needed to assess the effectiveness of family-centred anti-stigma interventions in improving adolescent mental health outcomes. Studies should explore how different forms of parental engagement such as communication, emotional support, and involvement in school-based programs contribute to reducing stigma and improving help-seeking behaviours. In addition, participatory research involving both adolescents and caregivers can help co-design interventions that are contextually appropriate and sustainable.

Resource Availability and Mental Health Service Utilisation

Limited resources significantly hindered mental health service access. Around 57.1% of adolescents reported insufficient resources, a common challenge in low- and middle-income countries. There is a shortage of trained professionals and uneven service distribution, especially in peri-urban areas. As a result, adolescents must travel long distances to access care, which discourages help-seeking.³⁸ Infrastructural deficiencies, such as overcrowded clinics and long waits, further reduce uptake, as noted.^{39, 40} The Ministry of Health should prioritize decentralization by expanding adolescent friendly mental health services within health centres, especially in peri-urban and rural areas. Investment in capacity building for frontline workers through specialized training and supportive supervision is essential to improve service quality and responsiveness. Additionally, infrastructure development, including mobile clinics and

telehealth platforms, could mitigate physical access barriers.

Research is warranted to evaluate the effectiveness of decentralized mental health service delivery models in improving access and outcomes for adolescents. Implementation science studies should explore the feasibility and sustainability of community-based programs, and assess how training interventions impact health worker attitudes and skills. Moreover, investigations into geographic disparities in service availability and utilization will inform targeted resource allocation and policy decisions.

Availability of tailored services and psychotropic drugs

A lack of tailored services was reported by 82% of respondents. They felt that current services were not age-appropriate and lacked adolescent-friendly spaces and peer educators.^{41, 42} Some studies have stressed that engagement improves when services match adolescents' social and developmental needs. Additionally, 87% noted the unavailability of psychotropic medications due to funding issues, poor procurement, and weak health information systems.^{43, 44} It is recommended that the government strengthen mental health supply chains through improved procurement processes, increased budget allocations, and enhanced health information systems.

Availability of peer educators, outreach program and feedback mechanism

The absence of peer educators was identified as another barrier. Sixty-five percent of respondents believed that peer-led programs would improve communication and help reduce stigma.^{45, 46, 47} Previous studies have shown that outreach programs increase awareness and build trust in mental health services.^{48, 49, 50}

Furthermore, 78% of adolescents noted the absence of feedback mechanisms. Without ways to share experiences or suggest improvements, adolescents

feel excluded from service design and stress the importance of including youth voices in shaping mental health services.^{51, 52} Overall, the findings highlight several systemic barriers such as poor infrastructure, medication shortages, and limited youth engagement that hinder access to mental health services. The Ministry of Health must develop and implement a national youth mental health engagement framework. This framework must mandate the formation of youth advisory committees at health facilities and create formal channels such as suggestion boxes, digital platforms, and periodic consultations for adolescents to provide feedback. Including young people's opinions will improve the significance, accessibility, and responsiveness of mental health services

.Key Predictors and Implications of Service Utilisation

Adolescents with access to resources were 23.6 times more likely to use services than those without, echoing findings by researchers, who underscore the importance of infrastructure and staffing. Gender was not a statistically significant factor ($p = 0.887$), suggesting stigma, accessibility, and awareness played more influential roles.

The type of mental health condition influenced service use. Adolescents diagnosed with substance use disorders were 428.5 times more likely to seek services compared to those with other conditions ($p < 0.001$). This is likely due to the visible and often disruptive nature of substance use. Conversely, depression was not a significant predictor ($p = 0.42$), possibly due to under-recognition, stigma, or lack of suitable diagnostic tools. The lack of culturally appropriate tools, such as the Shona Symptom Questionnaire, presents a barrier to early diagnosis and care in Zambia. These findings underscore the need for localized screening instruments, capacity-building efforts, and awareness campaigns that are tailored to the cultural context of Zambian adolescents.

CONCLUSION

The study decisively rejects the null hypothesis, demonstrating that knowledge, resource availability, and stigma significantly influence adolescent utilization of mental health services. Addressing these barriers is essential for the effective delivery of primary mental health services in Zambia. To alleviate low levels of utilization of primary mental health services by adolescents, targeted interventions, including decentralization of specialized mental health practitioners, drugs and insurance services, education, and policy changes, are necessary to mitigate utilization of primary mental health services by adolescents. Finally enhanced data tracking and monitoring systems are also needed to analyse service utilization trends and inform future improvements in adolescent mental health service delivery.

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