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ORIGINAL ARTICLE

Barriers to Treatment as a Hindrance to Health and Wellbeing of Individuals with Mental Illnesses in Africa: a Systematic Review

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Abstract
African countries continue to neglect the effects of mental illness on their communities. Identifying barriers to treatment and developing mitigation strategies is essential to address the burden of mental illness within Africa. We searched PubMed, Medline, PSYCHInfo, ERIC, Cochrane Library, ClinicalTrials.gov, and reference lists through June 2020. Studies addressed barriers to mental illness treatment affecting patients and/or their care team. Data was extracted using a standardized data collection form. Three independent, blinded reviewers extrapolated qualitative and quantitative data. Themes were summarized qualitatively. Thirteen studies reflecting urban and rural settings qualified for review. Participants were 17 to 58 years old. Males accounted for 49.9% of the study population. Barriers were categorized as attitudinal, economic, physical, political, and infrastructural. Attitudinal barriers were most prevalent; infrastructural barriers were least discussed. Policy and infrastructural implementations would mitigate interconnected barriers and improve health and wellbeing within Africa.

Keywords Mental health · Africa · Global health · Barriers · Treatment

Background

The COVID-19 pandemic has highlighted the prevalence of mental illness on a global scale with estimates ranging from 25 to 50% for people experiencing mental illness such as anxiety and post-traumatic stress disorder (PTSD) (Nochaiwong et al. 2021). As of 2019, Africa was shown to lag behind in meeting the objectives set out by the World Health Organization (WHO) Mental Health Action Plan 2013–2030. Approximately, 21% of the countries on the African continent reported the presence of recent mental health legislation

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compared to the global 40% (Eaton, 2019). In Africa, there has historically been a higher than reported mental illness burden within its 54 countries even prior to the pandemic, but the importance of mental illness treatment and its implications on society has continued to be neglected (Kisa et al. 2016; Ali and Agyapong 2016). The struggle to provide mental health services to the population of each African country leads to a widening treatment gap that leaves many Africans without treatment and care (Barke et al., 2011). The WHO estimates a 650,000-person burden of severe mental illness in Ghana alone, with a treatment gap of 98% (Barke et al., 2011). This is supported by the United Nations, who states that 97% of individuals with mental illnesses who need healthcare in Ghana lack access to needed services (Gberie, 2016). Similar statistics have been reported in other African countries (Mawadri, 2017). In response to these disconcerting treatment gaps, both the WHO and the Programme for Improving Mental Healthcare have created programming to increase research initiatives, services, and accessibility in different areas globally (WHO, 2008; PRIME, 2012; Jong-wook, 2017).

Many factors exacerbate the mental illnesses that individuals face within these countries. Stigma and lack of mental illnesses knowledge are the main contributors to the plight experienced by these individuals and their surrounding support system (Mawadri, 2017; Schweitzer, 2019). Additionally, individuals with mental illnesses are marginalized, and face discrimination due to traditional beliefs that these illnesses cannot be treated. When compounded with issues faced by developing countries, such as socioeconomic challenges and communicable diseases, this often leads to human rights violations and negatively affects the health and wellbeing of individuals living with mental illnesses (Mawadri, 2017). The scarcity of mental health services and inadequate management of existing resources also impact individual mental illness treatment within these countries (Okasha, 2002). WHO estimates that Kenya allocates about 0.05% of its health budget to mental health, centralizing about 70% of these mental health facilities and resources in the capital city of Nairobi (Gberie, 2016). Therefore, these resources are primarily limited to individuals who experience minimal physical and economic barriers.

In order to address the mental illness burden within African countries, it is essential to determine the contributing factors that hinder individual access to mental health services. The objective of this study is to identify the barriers to mental illness treatment in African countries, highlight their effect on the health and wellbeing of patients, and develop strategies to mitigate these barriers.

Methods

Search Strategy and Selection Criteria

We wrote our systematic review in accordance with Cochrane methodology and PRISMA guidelines (Higgins and Green 2011; Moher et al 2009). We conducted a literature search through PubMed, MEDLINE via PubMed, PSYCHInfo, the Educational Resources Information Center (ERIC), and Cochrane Library from inception of the study to June 2020. We used Medical Subject Heading (MSH) terms which included mental illness terms ("Mentally Ill Persons," "Mental health," "Mental disorder"), barriers to treatment terms ("Healthcare barriers," "Access," "Healthcare access," "Barriers to healthcare"), stigma terms ("Social Stigma,", "Social Behavior"), and terms for African countries ("Africa" and names of all 54 African countries). We also limited our search strategy to "NOT HIV"

because our initial search yielded several articles involving HIV. This search strategy was modified to fit each electronic database. The full search strategy is provided in our study Appendices. We also searched for relevant articles in clinicaltrials.gov and manually reviewed references of included studies in our systematic review (see Appendix 1).

In order to select eligible studies, we used the following inclusion criteria: (1) cohort studies, qualitative studies, cross-sectional studies, case series, and/or outcomes research evaluating (2) barriers to mental illness treatment in (3) persons affected by mental illnesses in Africa. We were particularly interested in understanding how these barriers impact the health and wellbeing of individuals with mental illnesses.

Due to the dearth of available literature, our study design inclusion criteria were left broad to prevent limiting our search and missing useful information. Broad inclusion criteria also prevented the team from missing some higher-order studies; however, all included studies were qualitative. Exposures were also left open for broad interpretation and covered potential obstacles for individuals receiving treatment. This included physical or ideological constructs that prevented individuals with mental illnesses from seeking treatment.

Outcome measures were reported using an internally developed scale. Our primary outcome was defined as the health and wellbeing of individuals with mental illnesses, which are directly impacted by barriers to mental illness treatment and access in Africa. When available, we collected data regarding potential recommendations, strategies, and solutions to address the barriers to mental illness treatment and related implications. We also reviewed individual studies for information regarding how barriers to mental illness treatment (and potential solutions to these barriers) relate to institutionalization, mental health service utilization, and employment. We anticipated that addressing mental illness and improving the wellbeing of individuals with mental illnesses would result in an increase of related recommendations. This helps reinforce the importance of treatment and highlights any harms associated with the lack thereof.

Study Selection

We divided the results of our literature search equally among three blinded reviewers, such that each article was reviewed on two separate occasions by two independent reviewers. In the event that the reviewer was unable to determine eligibility based on title and abstract, the full-text article was reviewed in duplicate and independently by two blinded reviewers. Discrepancies were resolved by a third blinded reviewer.

Methodological Quality Assessment

The methodological quality of all eligible studies was assessed to investigate internal validity with respect to study design bias. We used the recommended Critical Appraisal Skills Programme (CASP) checklist for qualitative research to determine the methodological quality and risk of bias of each included study (CASP, 2020). There was no reported threshold value established by CASP; therefore, we adopted an alternative threshold scale based on a standard correlation coefficient scale. We correlated "yes" and "no" answers associated with the CASP checklist, to scores of 1 and 0, respectively. Studies scoring above 7 on a 10-point scale were considered to have a "low risk of bias" and were included in our review. Studies scoring below 3 on a 10-point scale were considered to have a "high risk of bias" and were excluded.

Two, blinded, independent reviewers assessed and categorized the methodological quality of chosen studies through the Rayyan online software. Any discrepancies were resolved by a third blinded reviewer. Because of the nature of our review, we were unable to formally incorporate the results of the CASP checklist into a sensitivity analysis. Instead, we used the findings from the CASP checklist to provide general commentary on the overall strength and quality of our findings.

Our sensitivity analyses investigated the methodological quality of our included studies. Studies scoring above 7 on a 10-point scale were considered to have "low risk of bias" and remained included in our review. Studies scoring below 3 on a 10-point scale were considered to have "high risk of bias" and were excluded. Since our included studies scored a minimum of 9, no studies were excluded for methodological quality (Appendices 2 and 3).

Data Analysis

Data was extracted from included studies using a standardized data collection form. Three independent reviewers worked on extrapolating and documenting qualitative and quantitative data from chosen studies. Discrepancies were resolved through team discussion (refer to Appendix 4a & 4b for details of information collected).

The exposures, study designs, and outcome metrics were varied, thus eliminating the need for heterogeneity measures. Formal statistical synthesis was not possible due to heterogeneity of data presentation in included studies, but we were able to summarize qualitative effects from all included studies using a formulated data collection form (see Appendix 4b). We did not encounter any missing data from included studies.

We provided a qualitative summary of our primary outcomes and related recommendations, strategies, and solutions given that they were not amenable to quantitative analysis. We assessed which group was favored for each outcome and the associated statistical significance. We then considered potential methodological flaws influencing these results. A summary assessment was generated based on overall trends observed in the results and categorized by primary outcomes and resulting recommendations, strategies, and solutions.

Subgroup analyses were performed to explain differences between rural and urban settings; however, an insufficient number of studies were available to perform subgroup analysis by country.

Results

Our search strategy yielded 717 unique studies after duplicates were removed (Fig. 1). The following study designs were included: cross-sectional, cohort, qualitative, and case-series. We excluded 564 studies through title and abstract revision, making sure that studies were located in Africa and specifically addressed barriers to receiving treatment, not barriers during or after treatment. After screening 153 full texts, we excluded an additional 140 studies that did not meet eligibility criteria. Thirteen studies—12 unique studies and 1 report—with 2767 participants were included after resolving conflicts. Included studies represented 7 different research groups. Abayneh et al., Hailermariam et al., and Nakuu et al. represented the Hanlon study group; Schierenbeck et al., Andersson et al., Sharaf et al., and Topper et al. represented the Van Rooyen study group; and Umubyeyi et al. and Rugema et al. represented the Kranz study group. Studies were either mixed-methods cross-sectional or qualitative; included cross-sectional studies presented both qualitative

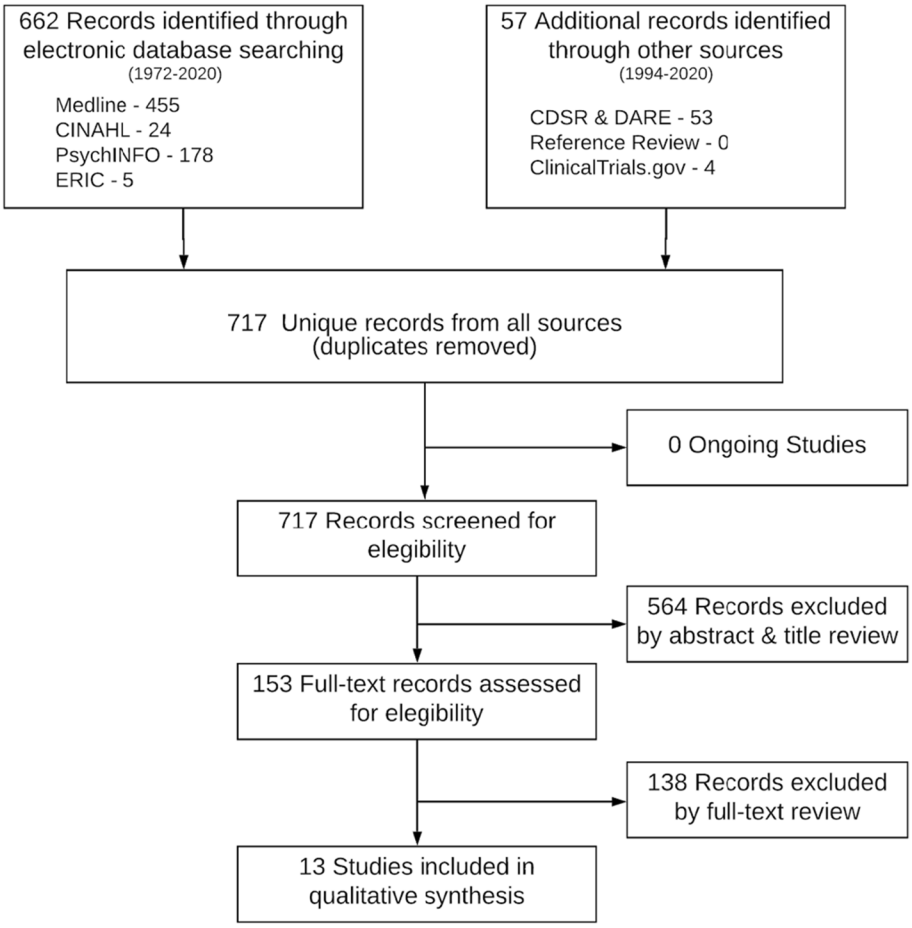

Fig. 1 PRISMA flow diagram. Figure 1 highlights the study inclusion flow diagram in accordance with PRISMA guidelines

and quantitative data and contributed to the qualitative findings of this study. Included studies represented 8 African countries in both urban and rural settings (Fig. 2). Studies were published between 2008 and 2017. South Africa had the highest number of studies (3 studies), followed by Ethiopia, Uganda, and Rwanda (2 studies). The reported ages of study participants ranged from 18 to 56 years old; only 7 studies reported participant ages. Of the included study participants, 1380 (49.9%) were male; 1387 (50.1%) were female. A total of 916 (33.1%) of study participants were married, and 1545 (55.8%) were widowed, divorced, separated, or single. Of the study participants, 1341 (48.5%) had less than a high school educational attainment level, whereas 737 (26.6%) of study participants had at least

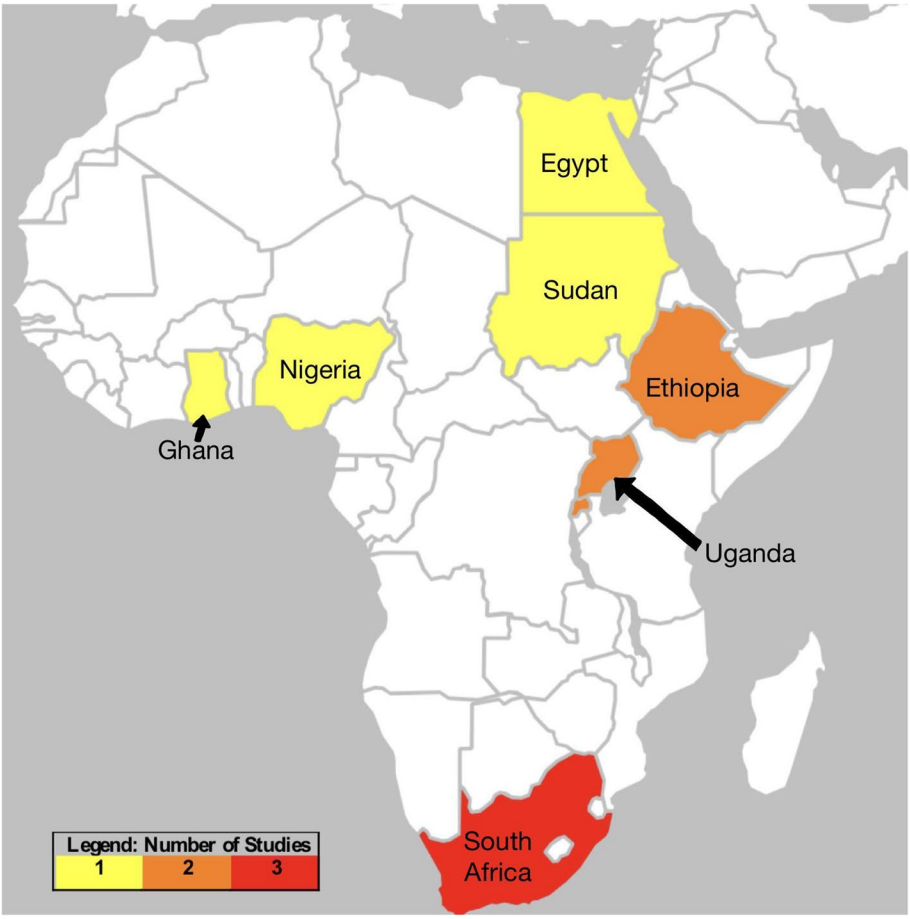

Fig. 2 Study density by country heat map. Figure 2 illustrates the countries represented by included studies within our systematic review

a high school educational attainment level. Given the potential impact of religion on treatment-seeking behavior, we also included religion in our study characteristics when it was provided. Among the 3 studies that reported religion, 86 (75.4%) of study participants were Christian and 24 (21.1%) were Muslim (Table 1).

Two out of 13 studies scored less than 10 in methodological quality (Appendix 3). Topper et al. received a 9 due to its unclear study aim (Topper et al., 2015). Ibeziako et al. received a 9 due to its ambiguous data collection methods (Ibeziako et al., 2008). An insufficient number of details were provided to fully understand the participant interview process.

Five key barriers to mental illness treatment in Africa were identified: attitudinal, economic, physical, political, and infrastructural (Table 2). Attitudinal and economic barriers were most frequently mentioned in 11 and 9 studies, respectively. Seven studies referenced physical and political barriers and 5 studies referenced infrastructural barriers. The frequency with which certain barriers appeared in the studies varied depending on whether the setting was rural or urban. Studies also highlighted different

Table 1 Study characteristics. Table 1 describes study characteristics for included studies within this systematic review. Study characteristics include sex, study setting, and participant marital status, education, and religious affiliation

	Sex Male/female		Setting	Marital status	Education	Religion
Abayneh et al. (2017)	12	11	R	NR	20 (<HS), 3 (>=HS)	16 (Ch), 7(Mu)
Ali and Agyapong (2016)	48	55	U	75 (M), 27 (WDS/Si)	72 (<HS), 31 (>=HS)	NR
Andersson et al. (2013)	510	467	U/R	158 (M), 32 (WDS), 787 (Si)	399 (<HS), 578 (>=HS)	NR
Hailemariam et al. (2017)	31	39	R	NR	NR	NR
Ibeziako et al. (2008)	6	9	U/R	NR	NR	11 (Ch), 4 (Mu)
Nakku et al. (2016)	12	64	R	NR	68 (<HS), 8 (>=HS)	59 (Ch), 13 (Mu), 4 (O)
Rugema et al. (2015)	20	23	U/R	NR	NR	NR
Schierenbeck et al. (2013)	2	10	SU/R	NR	NR	NR
Shah et al. (2017)	27	27	R	28 (M),14 (WDS), 12 (Si)	NR	NR
Sharaf et al. (2012)	167	33	U	150(Si)	NR	NR
Tawiah et al. (2015)	105	172	U	77 (M), 50 (WDS),139 (Si)	131 (<HS)	NR
Umubyeyi et al. (2016)	440	477	NR	578 (M), 35 (WDS), 299 (Si)	651 (<HS), 117 (>=HS)	NR
*Topper et al. (2015)	510	467	U/R	158 (M), 32 (WDS), 787 (Si)	399 (<HS), 578 (>=HS)	NR

*Topper et al. (2015) is a report based on Andersson et al. (2013)

U urban, *R* rural, *U/R* urban/rural, *SU/R* semi-urban/rural, *NR* not reported

M married, *WDS* widowed/divorced/separated, *Si* single, *NR* not reported

<HS less than a high school education, *>=HS* greater than or equal to a high school education

Ch Christian, *Mu* Muslim, *O* other religion

Table 2 Primary outcomes. Table 2 summarizes themes of barriers (outcomes) highlighted within each included study and the systematic review. Barriers include attitudinal, economical, physical, political, and infrastructural. The list of studies appears vertically, while the barriers appear horizontally by theme; the totals refer to the number of studies that cited each kind of barrier. Shading in green is for ease of visibility

Study	Theme of Barriers (Outcomes)**				
	Attitudinal	Economical	Physical	Political	Infrastructural
Abayneh et. al, 2017					
Ali and Agyapong, 2016					
Andersson et. al, 2013					
Hailemariam et. al, 2017					
Ibeziako et. al, 2008					
Nakku et. al, 2016					
Rugema et. al, 2015					
Schierenbeck et. al, 2013					
Shah et. al, 2017					
Sharaf et. al, 2012					
Tawiah et. al, 2015					
Umubyeyi et. al, 2016					
**Topper et. al, 2015*					
Total	11	9	7	7	5

*Topper et. al, 2015 is a report based on the Andersson et. al, 2013 study

**Attitudinal: *stigma, fear of stigmatization, attitude or health seeking behaviors, discrimination, societal beliefs in alternative treatments*; Economical: *inability to pay, poverty, finances*; Physical: *access to healthcare unsupportive familial relationships*; Political: *insufficient stakeholders, lack of prioritization by policymakers, inefficient policies*; Infrastructural: *lack of health facilities, staff, stakeholders; unreliable availability of medications, educational programming*

stakeholder perspectives regarding barriers faced by individuals with mental illnesses. These studies included perspectives of community members, individuals with mental illnesses, educators, administrators, healthcare stakeholders, mental illness professionals, and caregivers. This revealed a large overlap in barriers to mental illness treatment within highlighted African countries (Table 3).

All study recommendations were intended to help individuals receive better mental illness treatment and decrease the current barriers to treatment while impacting individual health and wellbeing. The most common recommendations included bolstering the availability of mental illness treatment facilities and resources and amending policy. This would have a dual impact on addressing both infrastructural and physical barriers. Policy development or amendment would provide government officials with an opportunity to take a closer look at current budget allocation and redistribute funds to meet community needs within their respective countries. Policies should also be developed to standardize training of health professionals who work specifically with individuals with mental illnesses.

Subgroup analyses were conducted and revealed similar barriers in both rural and urban settings. However, physical barriers, such as access to treatment, and attitudinal barriers, such as community stigma, were more prevalent within rural settings (Tables 1 and 2).

Discussion

In this systematic review, we highlighted five categories of barriers to mental illness treatment in African countries: attitudinal, economic, physical, political, and infrastructural barriers (Table 2). Attitudinal barriers (i.e., stigma, fear of stigmatization, attitudes of

Table 3 Recommendations, strategies, and/or solutions to address barriers to mental health treatment. Table 3 highlights recommendations, strategies, and/or solutions to addressing barriers to mental health treatment suggested by individual study authors

Study	Recommendations, strategies, and/or solutions
Abayneh et al. (2017)	Increase service user and caregiver involvement in the Ethiopian mental health system
Ali and Agyapong (2016)	Increase knowledge and awareness about mental health; provide quality mental health services, increase access; provide more affordable therapy/treatment; expand mental health services utilization in Sudan
Andersson et al. (2013)	Increase the availability of healthcare; improve mental health literacy in the community
Hailemariam et al. (2017)	Strengthen systems of care for chronic illness and legal frameworks; expand options for affordable and effective medication and psychosocial interventions
Ibeziako et al. (2008)	Demonstrate the feasibility and importance of carrying out needs assessments in resource-poor contexts
Nakku et al. (2016)	Increase maternal mental healthcare in rural and low income communities in Kamuli
Rugema et al. (2015)	Improving availability, accessibility, acceptability, and quality of mental healthcare at all levels
Schierenbeck et al. (2013)	Utilize the Mental Health Care Act to propel South Africa toward the full realization of the right to health
Shah et al. (2017)	Establish quality improvement project to create effective community-based mental healthcare that could serve as an example for other LMIC
Sharaf et al. (2012)	Develop clinical approaches for managing internalized stigma and suicide risk among individuals with schizophrenia
Tawiah et al. (2015)	Develop and implement community level policy for mental healthcare; intensify mental health education at the community level
Umubyeyi et al. (2016)	Increase number of health professionals; secure quality mental healthcare to meet population needs
*Topper et al. (2015)	Improve access to and quality of treatment among people with PTSD

*Topper et al. (2015) is a report based on the Andersson et al. (2013) study

LMIC low-middle-income country

health-seeking, discrimination, and societal beliefs in traditional healers and prayer) were the most common, as they were identified in 11 of 13 studies. Economic barriers (i.e., not being able to pay for services, poverty, and finances) were highlighted in 9 of 13 studies. Physical barriers (i.e., access to services, and significant others restricting treatment), as well as political barriers (i.e., low number of stakeholders, policy barriers, inefficient policy), were each identified in 7 of 13 studies. Infrastructural barriers (i.e., lack of health facilities, lack of staff and stakeholders, and unreliable availability of appropriate medications) were the least frequently identified barriers, which were highlighted in 5 of 13 studies. All identified barriers are interconnected and highlight the systemic nature of addressing mental illness within the continent. Additionally, these barriers can often impede patient and caregiver involvement in mental health systems and restrict utilization of available services. Findings of our systematic review expose opportunities for improvement, which are highlighted below.

Attitudinal Barriers

Spearheading new initiatives and bolstering existing programming could augment awareness of mental illness within African countries. In order to adequately serve the different population needs, it is imperative to obtain a community needs assessment and receive input from citizens of the country. Collaboration with members of the community can facilitate buy-in by others and also improve outcomes in relation to sustainability of program impact. Increasing community awareness of the burden of mental illness within each country is designed to improve perceptions of mental illness. Seeing as certain mental illnesses such as depression present differences in prevalence among genders, it is important that programming be both inclusive and sensitive to cultural practices and individual characteristics. Since gender and age have proven to be linked to differences in attitudes toward mental illness and preferred coping mechanisms, separate initiatives and programming for both genders representing different age groups should be considered when educating community members who live in gender-separated societies for cultural, social, and/or religious reasons (Ward et al., 2013). Acknowledgment of community members' religious affiliations is also important, as attitudinal barriers and stigma may stem from individuals choosing religious coping mechanisms for their mental illness, rather than medical treatment (Ward et al., 2013). Additionally, special consideration should be taken when educating community members about mental illness, as the delivery of information is often related to its reception. Fear of stigmatization may also be present among community members who partake in mental illness educational programming. Therefore, it is important to include community leaders such as religious leaders, politicians, and even celebrities in discussions regarding mental illness education, in order to devise a plan tailored to the community one wishes to educate. Creating an environment that is sensitive to community members' cultural and personal needs will ultimately provide a safe space for the acknowledgment of psychological problems and openness to learn about and utilize mental illness resources. The focus on awareness will help combat stigma, prejudice, and discrimination faced by individuals with mental illnesses and related stakeholders. The enhancement to the community's knowledge would ultimately improve the wellbeing of those affected by mental illnesses within African countries.

Economic Barriers

The populations of rural and urban communities in African countries may not be able to pay for mental illness treatment and services, as poverty and lack of adequate finances pose severe threats to service utilization. Therefore, fund allocation toward mental illness is imperative for the implementation of initiatives at a community, country, and continental level. Increasing the national budget for public health programming encompassing mental illness initiatives, as well as increasing mental health infrastructure such as facilities, educational professionals, and healthcare providers would help to address the high rates of homelessness, institutionalization, and readmission for those who are able to access care. For example, South Africa spent 5% of its total public health budget on mental illness in 2016, with inpatient care representing 86% of mental healthcare expenditure. Of the uninsured population who required mental health services, less than 1% received inpatient care and about 7% received outpatient services. Similar statistics prevail in other African countries, suggesting that monetary and political investments are needed to improve the state

of economic barriers that often deter patients from seeking adequate care (Docrat et al., 2019).

Physical Barriers

Addressing physical barriers often starts with the acknowledgment of mental illness resources within the community and anticipated usage of such resources. Mental illness resource distribution remains an issue within African countries, as resources such as healthcare providers and treatment facilities are mainly centralized in urban settings, leaving individuals who reside in rural settings with decreased ability to access these resources. Additionally, significant others of mentally ill individuals may restrict their family members from accessing care, thus posing additional barriers to treatment. In order to combat physical barriers, we propose an integrated approach between healthcare providers, treatment facilities, and community educational initiatives previously mentioned. Available resources presented through educational initiatives should include transportation to treatment sites; on-site services that provide medication and outpatient treatment, counseling, and specific illness education; and/or traveling healthcare providers in order to address the illness burden in locations where mental illness resources are scarce. Collaboration through stakeholders involved in political, economic, and infrastructural barriers is also necessary to help support and fund such initiatives.

Political Barriers

The studies included in this review recommend amendments to policy, in order to increase and redistribute mental illness resources within individual African countries (Ali and Agyapong, 2016; Nakku et al., 2016; Rugema et al., 2015; Hailemariam et al., 2017). Tawiah et al. highlight a need to develop and implement community-level policies for mental illness care in Ghana. Schierenbeck et al. also highlight the Mental Health Care Act of 2002, which was considered a positive move by South Africa. This act was designed to replace the Mental Health Act of 1973 and uphold the WHO's basic principles guiding mental healthcare law within South Africa. It allowed the country to recognize and protect the rights of individuals with mental illnesses.

Stigma and negative traditional connotations of mental illness within African countries have resulted in politicians and government officials neglecting to address the illness burden within their countries. Other political agendas are prioritized, leading to a low number of political stakeholders, inefficient policies, and barriers to policy inception and implementation. The enhancement of public health campaigns through structured worldwide initiatives such as the WHO Mental Health Action Plan for 2013–2030 may provide the necessary push for regional politicians to redirect policy implementation to public health initiatives that service mentally ill persons and their communities. The Health Action Plan was created originally to increase service quality and usage for mental, neurological, and substance use disorders in lower and middle-income countries (LMIC) (WHO, 2008). Despite the objectives of this action plan, Africa has unfortunately fallen behind in meeting the goals set forth by the WHO.

Additionally, campaigns for each region or country should be designed with cultural, religious, and demographic competencies in mind, as resources needed in one African country may differ from those needed in other African countries (WHO, 2008). While

fund allocation may differ from country to country, it is evident that resources dedicated to public health should increase to adequately service the needs of each country. There is a need for policy implementation to reallocate funds and resources toward public health efforts such as prevention, education, and management of mental illness in underserved communities that is needed rather than exhausting available funding on inpatient and outpatient services that neglect to provide care to the economically disadvantaged. It is also important to note that long-term impacts of policy amendment include increased quality of mental health services, treatment, and care; increased mental illness service utilization; and increased mental health literacy among stakeholders.

Infrastructural Barriers

The need for amendment of the health system's infrastructure is both evident and supported by the WHO Mental Health Atlas, 2017 Edition (WHO, 2017). The *Mental Health Atlas* represents approximately 80% of the African continent and presents data demonstrating the progress of the Comprehensive Mental Health Action Plan, which acknowledges that it is essential to develop quality mental health facilities and enhance community training among mental healthcare professionals within each country (WHO, 2017). Infrastructural barriers may be the most integrated with aforementioned barriers, as stigma, finances, access to care, and policy are directly related to physical infrastructure and utilization. Lack of healthcare facilities remains a huge issue in African countries, as individuals who are able to seek mental illness treatment may not be able to access reputable healthcare facilities. Additionally, individuals may not know where to access available healthcare providers who are trained to treat mental illnesses. There is a shortage of mental health staff and stakeholders within these countries, therefore leading to overworked staff and underserved populations. Aside from increasing the mental health workforce through formal training and education, task sharing can be implemented to overcome the lack of specialized mental health professionals throughout Africa. Resources such as medications may not be available to patients in need, thus leading to patients seeking medications from unauthorized suppliers or replacing prescriptions with herbals and supplements recommended by traditional healers.

In order to address this barrier, there must be an expansion of the healthcare workforce to meet the needs of the population. Community educational programs should provide information to recruit individuals into healthcare and offer mentorship to those who are interested in formal medical certifications and training. Registries listing available healthcare providers who are trained to treat mental illness should also be available to community members via resource websites and bulletins at community centers and religious institutions. Lastly, funds should be allocated to building primary care and multi-specialty healthcare facilities that can provide primary care but also secondary and tertiary healthcare to patients. Initial infrastructural goals should include building one facility in each country and doubling the mental healthcare workforce through formal medical training, missionary work, and partnerships with other institutions. Healthcare facilities and trained medical professionals will be able to dispense appropriate medications to patients, while efforts are made to cease the use of non-authorized medication from pharmacies unaffiliated with official medical institutions; education regarding the use of supplements and herbals as treatments for medical conditions should also be considered. Infrastructural changes would positively impact societal knowledge regarding mental illnesses and staff availability. This would promote the development of new mental illness programming and

facilities and strengthen the quality of care provided by mental healthcare workers within African countries.

Research Implications

As illustrated above, barriers to mental illness treatment are interconnected and can impede patient and caregiver involvement in mental health systems and restrict utilization of available services. Therefore, we also suggest an integrated approach to conduct more research that directly addresses the mental illness disease burden and treatment gap in Africa. Our review further reveals the dearth of scientific literature regarding barriers to mental illness treatment and perceptions of individuals with mental illnesses in Africa. Findings suggest that more observational studies should be conducted to facilitate knowledge acquisition, specifically within the African scientific community (Ali and Agyapong, 2016; Shah et al., 2017; Andersson et al., 2013). In addition, there is an absence of quantitative data to support qualitative conclusions regarding mental illness in Africa. The literature suggests that cohort studies should be conducted to facilitate the accessibility of quantitative data on the subject matter, as well as to solidify the impact of the barriers to mental illness treatment in African countries. Conducting case–control studies to observe the direct effects of mental illness treatment and service utilization would also be beneficial. However, while conducting quantitative research with vulnerable populations, it is imperative that one is cautious as ethical concerns may arise.

Included studies span across Africa, with most of them originating in South Africa. However, since identified barriers between countries were very similar, suggested recommendations may be applicable in African countries with comparable barriers. Given the current state of mental illness in Africa and the relative recency of included studies, these results would most likely be applicable to a wide range of countries. Additionally, cultural change is slow to occur. Significant changes in identified barriers will likely not be immediately noticed.

Although this systematic review failed to reach more substantive conclusions regarding barriers to mental illness treatment in Africa, it reiterated an important finding: there is a disproportionate disease burden and a dearth of knowledge surrounding mental illnesses within African countries. This neglect negatively affects the individuals living with these illnesses and has implications on society related to increased poverty and stigma, as well as a decreased quality of life.

In addition to the COVID-19 pandemic, the social climate and prevalence of racial inequities in the USA has always had an impact on mental illness within the Black community. Therefore, it is not surprising that racism, stigma, and poverty continue to negatively impact the mental wellbeing of Black people within their communities. Black people are more likely to harbor feelings of worthlessness and experience more severe forms of mental illness, partly due to the overlooked barriers of mental illness treatment. Akin to Black people in the USA, those in Africa and the diaspora may face similar or worse forms of mental illness due to civil unrest, poverty, government corruption, and lack of acknowledgment of the barriers to mental illness, treatment, and care. For example, Ethiopian musician and civil rights activist Hachalu Hundessa was murdered in July 2020, leading to turmoil among his supporters in the Oromia region. Over the years, the Oromia region has been a repressed nation, where government opposition was met with plight and jail time. Hundessa gave the Oromo people a voice, and as a result of his death, his supporters fled to the streets where at least a hundred civilians and security personnel were killed. Now that Hundessa has passed on, the state of government

reform and mental wellness remains a question for many of his followers, as they are faced with uncertainty amidst civil unrest. In Nigeria, the Nigerian Armed Forces opened fire at unarmed Special Anti-Robbery Squad (SARS) protesters at Lekki Toll Gate in Lagos, Nigeria, killing at least a dozen people and vandalizing nearby properties in October 2020. In an effort to address Nigeria's long history of domestic armed robberies and kidnappings, SARS was created to dismantle violent crimes plaguing the country. However, over the years, SARS has morphed into the corrupt, violence-ridden entity that it has claimed to disband, committing robberies and other crimes that have been overlooked by the Nigerian government. Recently, citizens have begun protests to push for the dismantling of SARS, but the events of the Lekki Toll Gate Massacre show that the government may not have the citizens' best interest at heart, thus jeopardizing their wellbeing and mental health. These recent examples should serve as reminders that traumatic events are often followed by post-traumatic effects on citizen's physical and mental health.

Strengths and Limitations

Although the strength of our included study designs was limited due to their qualitative nature, this systematic review highlights the need for devoting more attention to this poorly studied subject matter. There was also a wide range of reported study characteristics, which made it difficult to compare studies. Among the reported study characteristics, individual study sample sizes (n) were small, resulting in a small total sample size (total n).

Our studies scored high in methodological quality, which was assessed using our risk of bias tool that was adapted from the Critical Appraisal Skills Programme. The lowest calculated methodological quality score for our included studies was a 9 out of 10, which illustrates that our included studies had little perceived bias.

Strengths of our systematic review included blinded reviewers during full-text review: two blinded, independent reviewers extrapolated and documented data on methodological quality from chosen studies, and discrepancies were resolved by the third reviewer. We also searched multiple databases and looked for unpublished studies on ClinicalTrials.gov.

Limitations include reviewer's previous exposure to study material, which may have resulted in implicit bias when interpreting results. Our study design strength was limited due to the qualitative data presented in our studies and lack of quantitative data among all included studies. The 4 included mixed-methods cross-sectional studies provided quantitative data; however, we were unable to conduct a formal quantitative analysis and assess for publication bias due to heterogeneity in the presentation of the quantitative data. In addition, the data collection form which was standard among reviewers was not universally accepted and may have introduced bias.

Conclusion

This study elucidates the importance of recognizing and addressing barriers to mental illness treatment in African countries. Through extrapolation of qualitative data from 13 studies, we highlighted five categories of barriers to mental illness treatment in African countries, as well as strategies to mitigate these barriers. The categories of barriers included attitudinal, economic, physical, political, and infrastructural barriers that are interconnected and can not only impede patient and caregiver involvement in mental health

systems, but also restrict utilization of available services if not addressed. An integrated approach involving additional research along with a thorough plan to mitigate all 5 barriers, with revisions and/or implementation of policies and infrastructural plans that directly address the mental illness disease burden and treatment gap in Africa, will be necessary to begin to see systemic change in addressing mental illness in African countries. Lastly, increasing dialogue regarding mental illness within African communities is fundamental to decreasing the stigma experienced in these communities. Awareness will help combat stigma, prejudice, and discrimination faced by individuals with mental illnesses and related stakeholders. This will further promote community knowledge and ultimately improve the wellbeing of those affected by mental illnesses within African countries.

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Declarations

Conflict of Interest The authors declare no competing interests.

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