



OPEN ACCESS

This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Department of Management Science, Kenyatta University, Nairobi, Kenya

Correspondence to:
Dinah M. Limiri,
diana.mwendwa34@gmail.com

Additional material is published online only. To view please visit the journal online.

Cite this as: Limiri DM. Mental Health Service Utilization Among Vulnerable Populations. Premier Journal of Public Health 2024;1:100011

DOI: <https://doi.org/10.70389/PJPH.100011>

Received: 5 October 2024

Accepted: 17 October 2024

Published: 28 October 2024

Ethical approval: N/a

Consent: N/a

Funding: No industry funding

Conflicts of interest: N/a

Author contribution:

Dinah M. Limiri – Conceptualization, Writing – original draft, review and editing

Guarantor: Dinah M. Limiri

Provenance and peer-review: Commissioned and externally peer-reviewed

Data availability statement: N/a

Mental Health Service Utilization Among Vulnerable Populations

Dinah M. Limiri

ABSTRACT

Although vulnerable populations are disproportionately affected by mental disorders, they face significant barriers when it comes to access and service utilization. Research has shown that these groups utilize services less frequently than the general population and remain with significant unmet needs. Barriers are the main factors that contribute to mental health service underutilization among these populations. Some of these barriers are stigma, financial constraints, geographical barriers, systematic discrimination and historical trauma, language barriers, and lack of competent care. Considering the complexity of these factors, there is a need to design effective strategies to address these barriers. Incorporating mental care into primary practice is one of the measures that can be used to address barriers and increase service utilization. There is also a need to incorporate technology into care. Recognizing the role that mental health plays on overall health and well-being can enable health systems and other stakeholders to put measures in place to address the existing barriers that undermine service use. The aim of this review is to investigate how vulnerable groups utilize mental services, including the barriers that hinder utilization and measures that can address these barriers.

Keywords: Mental disorders, Mental health service utilization, Mental care, Vulnerable groups, Barriers

Introduction

Mental disorders contribute to significant disease burden with research showing significant disability and premature mortality associated with these disorders.^{1–3} According to recent global estimates, 970 million people have mental disorders with anxiety and depressive disorders accounting for most of these cases.⁴ Although a call to action for more investment and prioritization of mental health has been made by different entities, mental health service utilization remains a challenge for some groups making it difficult to access and use these services effectively.⁵ Vulnerable populations are some of the groups that still face difficulty when it comes to health service utilization and access.⁶ Within the context of mental health, vulnerable populations can be broad but generally refer to individuals or groups who experience a higher risk of developing mental disorders or those that face significant obstacles when seeking mental care. Some of these populations include racial and ethnic minorities, people who are economically disadvantaged, the elderly, the homeless population, the lesbian, gay, bisexual, transgender, and queer (LGBTQ) community, veterans, refugees, and immigrants, among others. Vulnerability leaves these populations with unmet mental treatment needs and contributes to significant health disparities. It also makes these groups at risk of developing chronic mental disorders.

Recognizing the significance of mental health on overall health and well-being is the first step towards making mental services more accessible to vulnerable groups. Adequate use of mental care services is vital because of the impact that these disorders have on health and well-being. According to GBD,⁴ mental health disorders contribute to a high number of disability-adjusted life years (DALYS), with the global numbers rising from about 80.8 million in 1990 to 125.3 million in 2019. These disorders also account for high numbers of years lived with disability (YLDs) and years of life lost (YLLs).^{3,7} Adequate use of services is also necessary to prevent disease progression. Without treatment and early intervention, common mental health disorders are likely to become chronic and increase the burden on healthcare systems. Mental health disorders also contribute to a significant economic burden with the cost of treating mental illness and substance-related disorders averaging \$280.5 billion in the US and \$2.5 trillion globally in both direct and indirect costs.^{8,9}

A complex interplay of factors, both individual and structural explains why vulnerable populations underutilize mental care. According to Andersen's behavioral model of health service use, access to health services is determined by individual characteristics, contextual characteristics, health behaviors, and outcomes.¹⁰ Predisposing, need, and enabling factors play a role when it comes to a person's decision to use or not use health services. Examples of predisposing factors are demographic characteristics, social structures, and an individual's health beliefs.¹¹ Enabling factors make it possible for people to use health services. They include resource availability, social relationships, income, medical insurance, and access to free services, among others. Needs are factors that provide the motivation to use health services. Needs can either be perceived or evaluated. Examples of needs that drive people to use health services are illness, physical conditions, and disease conditions, among others. Figure 1 summarizes how these factors influence health utilization in relation to mental health. In a healthcare system where there is equitable access, every individual has an opportunity to receive the desired care. However, it does not always work, and barriers driven by predisposing and enabling factors drive unequal access and disparities. For instance, vulnerable populations always face financial barriers, stigma and cultural-related factors, geographical barriers, language barriers, barriers related to system discrimination, and a lack of culturally competent care, among other factors. All these affect healthcare utilization for these groups and lead to negative health outcomes.

Therefore, the aim of this review is to investigate the patterns of mental health service utilization among vulnerable groups. The paper will explore how

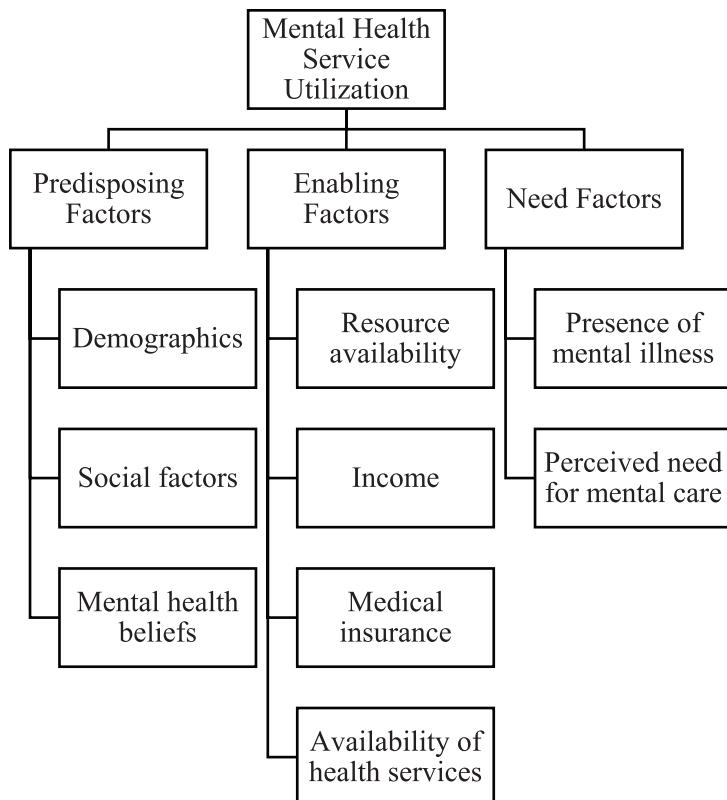


Fig 1 | Factors that inform mental health service utilization according to Andersen's Behavioral Model

different vulnerable groups utilize services and the barriers that make this utilization difficult. The paper also recommends the need for effective strategies that can address the identified barriers as a measure of increasing service utilization.

Current State of Mental Health Service Utilization Among Different Vulnerable Groups

Research documents that vulnerable populations are disproportionately affected by mental disorders than the general population, and despite this, their rates of using mental services remain significantly lower.^{12,13}

Racial and Ethnic Groups

According to research, there are significant racial and ethnic differences when it comes to using mental services with African Americans, Hispanics, and Asians using these services less frequently than their White counterparts.¹⁴⁻¹⁶ The 2008–2012 National Survey on Drug Use and Health reported that service use was highest among individuals from two or more races, Whites, and American Indian or Alaska Native.¹⁷ Black, Asian, and Hispanic adults had the lowest rates of use. The findings were replicated for different types of mental care services including outpatient care, inpatient care, and prescription. Also, the patterns of use among these groups did not change irrespective of the individual's gender, age, insurance status, and poverty status.

In one study, the number of Blacks, Hispanics, and Asians who received treatment for major depression

was a lot lower than that of Whites.¹⁶ The study also established that these minorities were less likely to receive a prescription for their depression compared to their White counterparts.¹⁶ Significant differences were also noted across different racial groups with the likelihood of receiving any outpatient services such as specialty outpatient care and non-specialty outpatient care, being lower among racial minority groups, as shown in Figure 2.¹⁴ According to the study, service use was lower among Asian and Pacific Islanders at 59%, followed by African Americans at 64%, and 70% for Latino Americans. The highest service utilization was reported among non-Hispanic Whites at 79%.¹⁴ Similar findings were reported by another study.¹⁵ African Americans and Hispanics did not visit professionals as much as Whites.¹⁵ Due to low service use, racial and ethnic minorities report higher unmet mental needs.¹⁸ For instance, during COVID-19, racial minority groups reported a higher mental health burden compared to Whites.¹⁹

LGBTQ Community and Sexual Minority Groups

For the LGBTQ community, data on mental service utilization are mixed. Some studies show health disparities in use and access of services, and other studies show that this group utilizes mental care services more than the general population.²⁰⁻²² However, what remains evident is that this group is disproportionately affected by mental disease than the general population.²⁰ According to Moagi et al.,²¹ mental health disparities in accessing care resulted from discrimination, lack of social support, and healthcare system exclusion. Due to these barriers, many people in this group had unmet healthcare needs. Another study reported that in Canada, transgender women were 2.4 times more likely to report unmet needs than heterosexual women. For bisexual participants, the likelihood of reporting unmet needs was 1.8 times greater than that of heterosexual women.²² Transgender women had a 1.6 times greater likelihood of reporting untreated depression than heterosexual women.²²

The differences in unmet needs of mental health were mostly attributed to discrimination, social factors, inadequate support, and healthcare exclusion because, after adjusting for these factors, these differences were not reported.²² Similarly, Cronin et al.²³ (2021) noted that barriers contributed significantly to unmet mental health needs among LGBTQ individuals. Although 66.6% of the 592 study participants had accessed mental care services at one point in their lives, others indicated that they were not able to access these services despite the fact that they were useful.²³ Most of the study participants (66%) indicated that they were currently experiencing mental distress, but only 18.2% were able to seek care within the last month. Most of them attributed the failure to seek care to financial barriers, lack of time, and stress attributed to the fact they were a minority.²³

Two of the reviewed studies showed people who identified as LGBTQ were highly likely to seek mental support than those who identified as heterosexual.^{24,25}

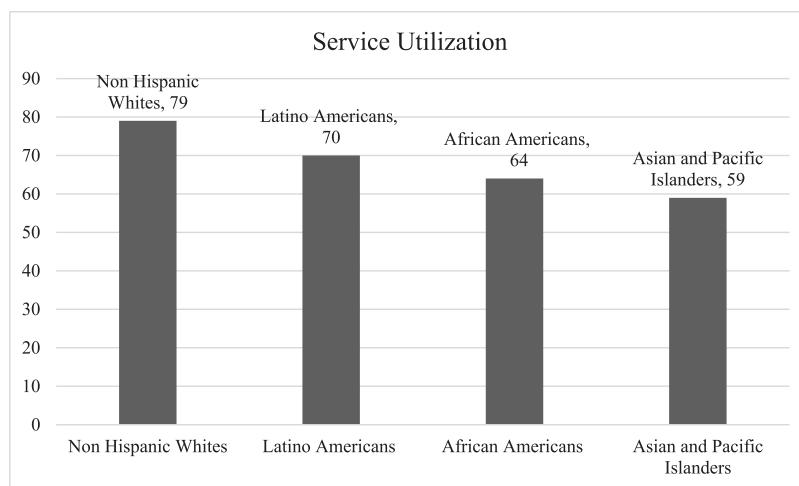


Fig 2 | Shows the percentage of mental health service utilization among different vulnerable populations

According to Bourdon et al.,²⁵ LGBT students were highly likely to use these services than heterosexual students. The students mainly used services for depression and anxiety. They were also more likely to see a counselor or therapist and seek treatment from a psychotherapist or from other healthcare professional.²⁵ Similarly, Dunbar et al.²⁴ noted higher rates of mental health service utilization (1.87 times more likely) among sexual minority students than their heterosexual counterparts. Overcoming barriers such as lack of confidentiality, embarrassment, and uncertainty over eligibility for these services played a key role in the high rates of utilization among these students.²⁴ The high rate of mental service use among LGBTQ students could also be informed by need which can be attributed to the fact that these groups of students were more likely to report mental distress than the heterosexual participants. The high levels of mental distress informed their decision to seek care. Besides, the students used these services more because of the negative effects of discrimination, prejudice, and minority-related stress that they were likely to experience compared to the heterosexual students. However, it is necessary to understand that both studies were done in a college setting and involved college-going students making generalization of the findings difficult.

Homeless Population

An additional group that is disproportionately affected by mental health utilization is the homeless population. Just like any other vulnerable group, this group faces a lot of disparity when it comes to mental care. According to a study by Rhoades et al.,²⁶ mental health service utilization was mainly informed by need. Need in this case was informed by screening positive for either depression or post-traumatic stress disorder (PTSD). Of the 305 study participants, 26.30% had used mental care services within the past 30 days.²⁶ The study noted that an average of 63.25% of the homeless population did not utilize mental care services and were likely to have unmet needs for care.²⁶ Most of the participants

were mainly treated for PTSD and depression.²⁶ Krausz et al.²⁷ established similar findings. Of the 92.8% of the study participants who met the criteria for different mental disorders, including drug dependence, mood disorder, and anxiety disorder, only 14.9% had visited a psychiatrist within the past year. The study also found that only 12.7% of those who had a mental disorder were in the care of a mental health team.²⁷

However, findings by Folsom et al.²⁸ were different with the homeless population being highly likely to utilize services than the non-homeless population. The study, which comprised 10,340 participants with different mental conditions, including schizophrenia, bipolar disorder, and major depression, found that the homeless population was highly likely to use mental care services particularly residential treatment, inpatient psychiatric hospitalization, and emergency psychiatric treatment.²⁸ The utilization of outpatient treatment, day treatment, and case management was, however, lower.²⁸

Military Personnel and Veterans

Another vulnerable group that underutilizes mental care are military personnel on active duty and veterans. Despite the high risk of developing mental conditions, this group was highly unlikely to seek help because of barriers such as stigma and career concerns. According to Kline et al.²⁹ military veterans underutilized mental care. Of the 924 veterans who reported a mental or substance use disorder (SUD), only 27% reported using mental care.²⁹ Besides, only 433 of the 4069 study respondents reported using mental care. Similarly, findings were reported by Hines et al.³⁰ According to the study, of 19% of the study participants who reported stress and emotional problems, only 42% sought care. Similarly, out of the 6% of participants who had alcohol problems, 31% sought care.³⁰ Therefore, service utilization was still low. Addressing stigma was one of the main factors that informed mental service utilization.³¹ Veterans and military personnel were also likely to use mental care if they were female, had a functional impairment, and were of a lower rank.³⁰ Concerns about stigma and the impact that mental service utilization was likely to have on their careers contributed significantly to poor mental help-seeking.³²

Refugee and Immigrants

Refugees and asylum seekers are another vulnerable group that is disproportionately affected by mental disorders. While this group has a high number of mental health needs, it underutilizes care. According to Satinsky et al.,³³ asylum seekers and refugees in Europe underutilized mental services more than the general population. Different barriers, such as language, stigma, lack of awareness, and poor help-seeking behavior, contributed to these low rates of service utilization.³³ Similarly, Abebe et al.³⁴ reported that service utilization remained significantly lower among immigrants, including children and adolescents, compared to the general population.³⁴ PTSD, depression, and anxiety are the most reported mental disorders that inform refugees' decisions to seek care.³³⁻³⁷

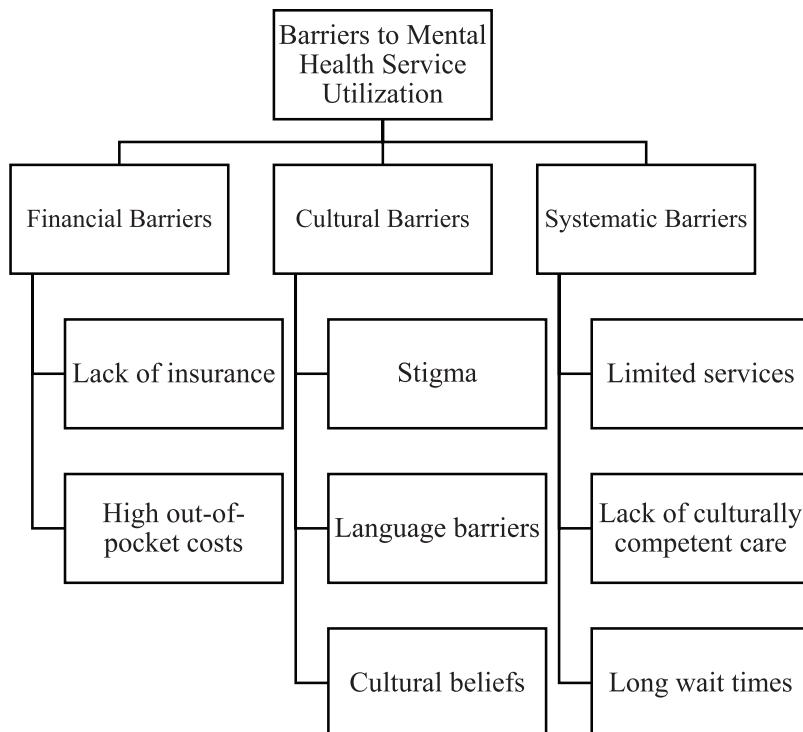


Fig 3 | Barriers to mental health service utilization among vulnerable populations

Barriers that Affect Service Utilization Among Vulnerable Groups

Various barriers make it challenging for vulnerable populations to use care, as summarized in Figure 3. The shame and stigma associated with mental disorders contribute to underutilization of mental care services by vulnerable populations. It is this shame and stigma that inform fear of discrimination and the subsequent refusal to seek help. Past studies show that vulnerable groups are more likely to perceive stigma related to mental disorders than the general population.³⁸ Stigma among vulnerable populations can result from many factors. For instance, cultural factors surrounding mental illness can be a barrier to help-seeking behavior. Personal beliefs and societal attitudes towards mental illness can also lead to perceived stigma regarding mental illness.³⁹ Negative beliefs about mental care can also contribute to stigma and low utilization care.⁴⁰ Stigma leads to shame and makes vulnerable groups not seek help when needed. Other than delayed treatment in seeking care, stigma also contributes to social isolation, discrimination, and reduced adherence to mental treatment.⁴¹ For instance, one study established that stigma affected help-seeking behavior among military personnel on duty and contributed to dropping out from treatment.³¹ Fear of being victims of stigma just for seeking care was also reported by asylum seekers as one of the reasons why they did not seek care.⁴²

Vulnerable populations are also likely to experience financial constraints which can affect mental health service utilization. Financial barriers make it almost impossible for vulnerable groups to access mental care because they limit affordability. It becomes

difficult to access mental health services without insurance coverage.²⁸ Out-of-pocket costs can also be prohibitive, especially for vulnerable groups who are economically disadvantaged. For instance, insufficient access to adequate financial resources was commonly mentioned as a barrier to care by a group of asylum seekers in Switzerland.⁴²

Lack of awareness of the available health services is an additional barrier that limits service utilization. For instance, vulnerable groups that are not well-versed with mental health issues or how the systems in that particular country work may not be aware of where to seek services when required. According to Satinsky et al.,³³ a lack of awareness on the available services was a commonly reported barrier to seeking and receiving the right care.

Systematic discrimination and historical trauma have also been cited as barriers that undermine service utilization by vulnerable groups. This is particularly the case for racial and ethnic minorities. Research shows that systematic discrimination and historical trauma are some factors that contribute to health disparities among minority communities.⁴³ One study has even linked structural racism to intergenerational transmission of depression.⁴⁴ For racial and ethnic minorities, this historical trauma and systematic discrimination can lead to reluctance to seek mental care leading to the worsening of the mental illness and the likelihood of the illness becoming chronic.⁴⁵ The distrust created by these traumatic experiences increases difficulty for minority groups to seek care because they feel the experiences may repeat themselves.

Language barriers and a lack of culturally competent care can also contribute to reluctance to seek care for vulnerable groups. This mainly affects refugees, asylum seekers, and ethnic minority groups that have limited English proficiency and cultural differences with the host community. Research shows that language barrier is a factor that limits care utilization among refugee and immigrant populations.^{46,47} Lack of interpreters and language services can affect how these groups utilize mental care because of limited communication between the patient and the provider.³³ Cultural competence is also regarded as essential in improving service utilization because it increases trust in the health system.⁴⁸

Geographic and transportation barriers mainly affect the elderly population and people residing in rural areas. For such populations, low use of mental services results from limited access to mental care facilities.⁴⁹ The limited access to facilities leaves these populations with only the option of traveling long distances to seek care. For elderly adults, access to transportation is an important determinant of health, which can affect access to care and contribute to poor health outcomes.⁵⁰ In the case of elderly adults dealing with mental illnesses, it is instrumental to have reliable means of transportation to care facilities to increase adherence to treatment. Lack of reliable transport can lead to care discontinuation and subsequent poor outcomes.

Strategies to Improve Service Utilization for Vulnerable Populations

Improving service utilization among vulnerable groups is challenging because of the multifaceted nature of factors and barriers that make utilization challenging. For different vulnerable populations, these barriers and individual characteristics leave these groups vulnerable and facing health disparities that lead to poor mental outcomes. As such, there is a need for multifaceted strategies that can effectively address these barriers. The first is to increase access to affordable mental care. For many vulnerable populations, underutilization remains a challenge because of the lack of affordability.⁵² This, coupled with the lack of medical insurance coverage and expensive out-of-pocket expenses, makes many vulnerable populations not to seek care when needed. One of the ways that providers can increase access to mental services is by integrating care. Integrating care services into clinical settings and primary care can increase access and utilization of mental services by vulnerable populations.

Leveraging technology such as telehealth can improve access to care for elderly populations and those residing in rural areas. One of the limitations that make it challenging to access mental care for such populations is the lack of adequate facilities. Telehealth is showing a lot of promise when it comes to improving health outcomes for these populations.⁵³

Providing culturally competent care that takes into account the cultural needs of different populations can also improve service utilization for vulnerable groups. Considering the sensitivity of mental health and the beliefs surrounding the same, it is vital to have mental providers who are aware of these differences and how they impact the use of services.⁵³ One way to address the cultural competence barrier is to have a diverse workforce that mirrors different groups.

Furthermore, education campaigns can play a crucial role in raising awareness about mental health and reduce stigma-related barriers. Providing education improves mental health literacy and makes people more aware of their health and why it is important to seek care.³⁸

The reviewed studies establish that mental health service utilization remains a challenge for vulnerable populations despite the fact that these groups are disproportionately affected by mental illnesses. Barriers related to stigma, financial constraints, historical trauma, language, geographical barriers, and lack of awareness of the available services still plague these groups and contribute to mental health disparity. There is a need to design effective multifaceted strategies that can address these barriers and increase service utilization. Based on the important role mental health plays on overall health and well-being, effective strategies that promote utilization are instrumental to improving mental health outcomes for these groups.

Conclusion

Despite the advancements and progress that have been made in addressing mental illnesses over the years,

some groups still face disparities and inequities in care stemming from low utilization of health services. For these groups, mental care services remain a luxury they cannot access or even afford leaving them with unmet mental health needs. Taking into account the significance of mental health on overall health and well-being, there is a need to address the barriers that contribute to low service use by these groups. Some of these barriers stem from systematic discrimination and historical trauma that have made it impossible for racial minority groups to trust healthcare systems. The barriers are also related to language, inadequate culturally competent providers, financial constraints, stigma, and a lack of awareness of the available care. Addressing these barriers can lead to significant improvement in service utilization. People are more likely to seek care if they feel comfortable with the healthcare system, are aware of the services provided, and can afford them. They are also likely to seek care if they feel comfortable with the care provider and can clearly explain their problems. With effective strategies, this is possible. For instance, integrating mental care into primary care can increase the number of people who have access to these services and make mental care more affordable. Mental health providers can also leverage technology to reach communities that are affected by geographical and transportation barriers.

Future studies can focus on how technology can be integrated into care to increase service utilization for vulnerable communities that lack access. Focusing on this area will bring into perspective the challenges these communities face and how technology can help to address these challenges by bringing care closer to the people. However, it is important to take note of the challenges that can occur in relation to technology especially in such areas with respect to poor connectivity and inadequate internet access, and how they can contribute to the burden of underutilization. Also, digital literacy barriers can affect utilization of these services and contribute to negative outcomes. Therefore, future areas of research can explore how these barriers can be addressed to support technology integration into care.

References

- 1 Walker ER, McGee RE, Druss BG. Mortality in mental disorders and global disease burden implications: A systematic review and meta-analysis. *JAMA Psychiatry*. 2015;72(4):334–41. <https://doi.org/10.1001/jamapsychiatry.2014.2502>
- 2 Vigo D, Thornicroft G, Atun R. Estimating the true global burden of mental illness. *Lancet Psychiatry*. 2016;3(2):171–8. [https://doi.org/10.1016/S2215-0366\(15\)00505-2](https://doi.org/10.1016/S2215-0366(15)00505-2)
- 3 Charlson FJ, Baxter AJ, Dua T, Degenhardt L, Whiteford HA, Vos T. Excess mortality from mental, neurological and substance use disorders in the Global Burden of Disease Study 2010. *Epidemiol Psychiatr Sci*. 2015;24(2):121–40. <https://doi.org/10.1017/S2045796014000687>
- 4 GBD 2019 Mental Disorders Collaborators. Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: A systematic analysis for the Global Burden of Disease Study 2019. *Lancet Psychiatry*. 2022;9(2):137–50. [https://doi.org/10.1016/S2215-0366\(21\)00395-3](https://doi.org/10.1016/S2215-0366(21)00395-3)
- 5 Patel V, Boyce N, Collins PY, Saxena S, Horton R. A renewed agenda for global mental health. *Lancet*. 2011;378(9801):1441–2. [https://doi.org/10.1016/S0140-6736\(11\)61385-8](https://doi.org/10.1016/S0140-6736(11)61385-8)

- 6 Waisel DB. Vulnerable populations in healthcare. *Curr Opin Anesthesiol.* 2013;26(2):186–92. <https://doi.org/10.1097/ACO.0b013e32835e8c17>
- 7 Rehm J, Shield KD. Global burden of disease and the impact of mental and addictive disorders. *Curr Psychiatry Rep.* 2019;21:1–7. <https://doi.org/10.1007/s11920-019-0997-0>
- 8 Substance Abuse and Mental Health Services Administration. Projections of National Expenditures for Treatment of Mental and Substance Use Disorders, 2010–2020. HHS Publication No. SMA-14-4883. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2014.
- 9 Trautmann S, Rehm J, Wittchen HU. The economic costs of mental disorders: Do our societies react appropriately to the burden of mental disorders?. *EMBO Rep.* 2016;17(9):1245–9. <https://doi.org/10.15252/embr.201642951>
- 10 Lederle M, Tempes J, Bitzer EM. Application of Andersen's behavioural model of health services use: A scoping review with a focus on qualitative health services research. *BMJ Open.* 2021;11(5):e045018. <https://doi.org/10.1136/bmjopen-2020-045018>
- 11 Alkhawaldeh A, ALBashtawy M, Rayan A, Abdalrahim A, Musa A, Eshah N, et al. Application and use of Andersen's behavioral model as theoretical framework: A systematic literature review from 2012–2021. *Iran J Public Health.* 2023;52(7):1346. <https://doi.org/10.18502/ijph.v52i7.13236>
- 12 Kirkbride JB, Anglin DM, Colman I, Dykxhoorn J, Jones PB, Patalay P, et al. The social determinants of mental health and disorder: Evidence, prevention and recommendations. *World Psychiatry.* 2024;23(1):58. <https://doi.org/10.1002/wps.21160>
- 13 Diaz A, Baweja R, Bonatakis JK, Baweja R. Global health disparities in vulnerable populations of psychiatric patients during the COVID-19 pandemic. *World J Psychiatry.* 2021;11(4):94. <https://doi.org/10.5498/wjp.v11.i4.94>
- 14 Garland AF, Lau AS, Yeh M, McCabe KM, Hough RL, Landsverk JA. Racial and ethnic differences in utilization of mental health services among high-risk youths. *Am J Psychiatry.* 2005;162(7):1336–43. <https://doi.org/10.1176/appi.ajp.162.7.1336>
- 15 Dobalian A, Rivers PA. Racial and ethnic disparities in the use of mental health services. *J Behav Health Serv Res.* 2008;35:128–41. <https://doi.org/10.1007/s11414-007-9097-8>
- 16 Cummings JR, Druss BG. Racial/ethnic differences in mental health service use among adolescents with major depression. *J Am Acad Child Adolesc Psychiatry.* 2011;50(2):160–70. <https://doi.org/10.1016/j.jaac.2010.11.004>
- 17 Substance Abuse and Mental Health Services Administration. Racial/Ethnic Differences in Mental Health Service Use among Adults. HHS Publication No. SMA-15-4906. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2015.
- 18 Harris KM, Edlund MJ, Larson S. Racial and ethnic differences in the mental health problems and use of mental health care. *Med Care.* 2005;43(8):775–84. <https://doi.org/10.1097/01.mlr.0000170405.66264.23>
- 19 Thomeer MB, Moody MD, Yahirun J. Racial and ethnic disparities in mental health and mental health care during the COVID-19 pandemic. *J Racial Ethn Health Disparities.* 2023;10(2):961–76.
- 20 King M, Semlyen J, Tai SS, Killaspy H, Osborn D, Popelyuk D, et al. A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. *BMC Psychiatry.* 2008;8:1–7. <https://doi.org/10.1186/1471-244X-8-70>
- 21 Moagi MM, van Der Wath AE, Jiyane PM, Rikhotso RS. Mental health challenges of lesbian, gay, bisexual and transgender people: An integrated literature review. *Health SA Gesondheid.* 2021;26(1):1–12. <https://doi.org/10.4102/hsag.v26i0.1487>
- 22 Steele LS, Daley A, Curling D, Gibson MF, Green DC, Williams CC, et al. LGBT identity, untreated depression, and unmet need for mental health services by sexual minority women and trans-identified people. *J Women's Health.* 2017;26(2):116–27. <https://doi.org/10.1089/jwh.2015.5677>
- 23 Cronin TJ, Pepping CA, Halford WK, Lyons A. Mental health help-seeking and barriers to service access among lesbian, gay, and bisexual Australians. *Aust Psychol.* 2021;56(1):46–60. <https://doi.org/10.1080/00050067.2021.1890981>
- 24 Dunbar MS, Sontag-Padilla L, Ramchand R, Seelam R, Stein BD. Mental health service utilization among lesbian, gay, bisexual, and questioning or queer college students. *J Adolesc Health.* 2017;61(3):294–301. <https://doi.org/10.1016/j.jadohealth.2017.03.008>
- 25 Bourdon JL, Liadis A, Tingle KM, Saunders TR. Trends in mental health service utilization among LGB+ college students. *J Am Coll Health.* 2021;69(7):750–8. <https://doi.org/10.1080/07448481.2019.1706537>
- 26 Rhoades H, Wenzel SL, Golinelli D, Tucker JS, Kennedy DP, Ewing B. Predisposing, enabling and need correlates of mental health treatment utilization among homeless men. *Community Men Health J.* 2014;50:943–52. <https://doi.org/10.1007/s10597-014-9718-7>
- 27 Krausz RM, Clarkson AF, Strehlau V, Torchalla I, Li K, Schuetz CG. Mental disorder, service use, and barriers to care among 500 homeless people in 3 different urban settings. *Soc Psychiatry Psychiatr Epidemiol.* 2013;48:1235–43. <https://doi.org/10.1007/s00127-012-0649-8>
- 28 Folsom DP, Hawthorne W, Lindamer L, Gilmer T, Bailey A, Golshan S, et al. Prevalence and risk factors for homelessness and utilization of mental health services among 10,340 patients with serious mental illness in a large public mental health system. *Am J Psychiatry.* 2005;162(2):370–6. <https://doi.org/10.1176/appi.ajp.162.2.370>
- 29 Kline AC, Panza KE, Nichter B, Tsai J, Harpaz-Rotem I, Norman SB, et al. Mental health care use among US military veterans: Results from the 2019–2020 National Health and Resilience in Veterans Study. *Psychiatr Serv.* 2022;73(6):628–35. <https://doi.org/10.1176/appi.ps.202100112>
- 30 Hines LA, Goodwin L, Jones M, Hull L, Wessely S, Fear NT, et al. Factors affecting help seeking for mental health problems after deployment to Iraq and Afghanistan. *Psychiatr Ser.* 2014;65(1):98–105. <https://doi.org/10.1176/appi.ps.004972012>
- 31 Britt TW, Jennings KS, Cheung JH, Pury CL, Zinnow HM. The role of different stigma perceptions in treatment seeking and dropout among active duty military personnel. *Psychiatr Rehab J.* 2015;38(2):142. <https://doi.org/10.1037/prj0000120>
- 32 Hom MA, Stanley IH, Schneider ME, Joiner Jr TE. A systematic review of help-seeking and mental health service utilization among military service members. *Clin Psychol Rev.* 2017;53:59–78. <https://doi.org/10.1016/j.cpr.2017.01.008>
- 33 Satinsky E, Fuhr DC, Woodward A, Sondorp E, Roberts B. Mental health care utilisation and access among refugees and asylum seekers in Europe: A systematic review. *Health Policy.* 2019;123(9):851–63. <https://doi.org/10.1016/j.healthpol.2019.02.007>
- 34 Abebe DS, Lien L, Elstad JI. Immigrants' utilization of specialist mental healthcare according to age, country of origin, and migration history: A nation-wide register study in Norway. *Soc Psychiatry Psychiatr Epidemiol.* 2017;52:679–87. <https://doi.org/10.1007/s00127-017-1381-1>
- 35 Schmidt M, Julia M. Mental health and healthcare utilisation in adult asylum seekers. *Swiss Med Week.* 2010;140(4546):w13110. <https://doi.org/10.4414/smw.2010.13110>
- 36 Lamkaddem M, Stronks K, Devillé WD, Olff M, Gerritsen AA, Essink-Bot ML. Course of post-traumatic stress disorder and health care utilisation among resettled refugees in the Netherlands. *BMC Psychiatry.* 2014;14:1–7. <https://doi.org/10.1186/1471-244X-14-90>
- 37 Blackmore R, Boyle JA, Fazel M, Ranasinha S, Gray KM, Fitzgerald G, et al. The prevalence of mental illness in refugees and asylum seekers: A systematic review and meta-analysis. *PLoS Med.* 2020;17(9):e1003337. <https://doi.org/10.1371/journal.pmed.1003337>
- 38 Golberstein E, Eisenberg D, Gollust SE. Perceived stigma and mental health care seeking. *Psychiatr Serv.* 2008;59(4):392–9. <https://doi.org/10.1176/ps.2008.59.4.392>
- 39 Gary FA. Stigma: Barrier to mental health care among ethnic minorities. *Issues Men Health Nurs.* 2005;26(10):979–99. <https://doi.org/10.1080/01612840500280638>
- 40 Pietrzak RH, Johnson DC, Goldstein MB, Malley JC, Southwick SM. Perceived stigma and barriers to mental health care utilization among OEF-OIF veterans. *Psychiatr Serv.* 2009;60(8):1118–22. <https://doi.org/10.1176/ps.2009.60.8.1118>
- 41 Ahad AA, Sanchez-Gonzalez M, Junquera P. Understanding and addressing mental health stigma across cultures for improving psychiatric care: A narrative review. *Cureus.* 2023;15(5):1–8. <https://doi.org/10.7759/cureus.39549>

42 Bartolomei J, Baeriswyl-Cottin R, Framorando D, Kasina F, Premand N, Eytan A, et al. What are the barriers to access to mental healthcare and the primary needs of asylum seekers? A survey of mental health caregivers and primary care workers. *BMC Psychiatry*. 2016;16:1–8. <https://doi.org/10.1186/s12888-016-1048-6>

43 Gone JP, Hartmann WE, Pomerville A, Wendt DC, Klem SH, Burrage RL. The impact of historical trauma on health outcomes for indigenous populations in the USA and Canada: A systematic review. *Am Psychol*. 2019;74(1):20. <https://doi.org/10.1037/amp0000338>

44 Hankerson SH, Moise N, Wilson D, Waller BY, Arnold KT, Duarte C, et al. The intergenerational impact of structural racism and cumulative trauma on depression. *Am J Psychiatry*. 2022;179(6):434–40. <https://doi.org/10.1176/appi.ajp.21101000>

45 Pederson AB. Management of depression in black people: Effects of cultural issues. *Psychiatr Ann*. 2023;53(3):122–5. <https://doi.org/10.3928/00485713-20230215-01>

46 Pandey M, Maina RG, Amoyaw J, Li Y, Kamrul R, Michaels CR, et al. Impacts of English language proficiency on healthcare access, use, and outcomes among immigrants: A qualitative study. *BMC Health Serv Res*. 2021;21:1–3. <https://doi.org/10.1186/s12913-021-06750-4>

47 Kim G, Loi CX, Chiriboga DA, Jang Y, Parmelee P, Allen RS. Limited English proficiency as a barrier to mental health service use: A study of Latino and Asian immigrants with psychiatric disorders. *J Psychiatr Res*. 2011;45(1):104–10. <https://doi.org/10.1016/j.jpsychires.2010.04.031>

48 Bhui K, Warfa N, Edonya P, McKenzie K, Bhugra D. Cultural competence in mental health care: A review of model evaluations. *BMC Health Serv Res*. 2007;7:15. <https://doi.org/10.1186/1472-6963-7-15>

49 Graves JM, Abshire DA, Mackelprang JL, Dilley JA, Amiri S, Chacon CM, et al. Geographic disparities in the availability of mental health services in US public schools. *Am J Preven Med*. 2023;64(1):1–8. <https://doi.org/10.1016/j.amepre.2022.09.003>

50 Maresova P, Krejcar O, Maskuriy R, Abu Bakar NA, Selamat A, Truhlarova Z, et al. Challenges and opportunity in mobility among older adults—Key determinant identification. *BMC Geriatr*. 2023;23(1):447. <https://doi.org/10.1186/s12877-023-04106-7>

51 Mezzina R, Gopikumar V, Jenkins J, Saraceno B, Sashidharan SP. Social vulnerability and mental health inequalities in the “Syndemic”: Call for action. *Front Psychiatry*. 2022;13:894370. <https://doi.org/10.3389/fpsyg.2022.894370>

52 Butzner M, Cuffee Y. Telehealth interventions and outcomes across rural communities in the United States: Narrative review. *J Med Int Res*. 2021;23(8):e29575. <https://doi.org/10.2196/29575>

53 Stubbe DE. Practicing cultural competence and cultural humility in the care of diverse patients. *Focus*. 2020;18(1):49–51. <https://doi.org/10.1176/appi.focus.20190041>