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Review of Epilepsy Perceptions and Attitudes Across African Countries

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ABSTRACT

Purpose: This review synthesizes research on perceptions and misconceptions about epilepsy across various countries, exploring beliefs that attribute epilepsy to supernatural causes, contagion, or mental retardation. It hypothesizes that these misconceptions contribute to the stigmatization and social exclusion of individuals with epilepsy (PwE).

Research Design and Methodology: The review compiles findings from studies conducted in Mali, Nigeria, Pakistan, Saudi Arabia, Egypt, and Ethiopia. These studies focus on teachers, parents, and community members and employ qualitative methods such as surveys and interviews. Sampling methodologies vary but include educational and community-based settings.

Findings and Discussion: The findings indicate that epilepsy-related misconceptions are widespread, leading to stigma and exclusion from education, employment, and social interactions. Many communities view epilepsy as contagious or caused by supernatural forces, reinforcing discrimination. Teachers and parents play a role in perpetuating these beliefs, further marginalizing PwE.

Implications: Addressing epilepsy-related stigma requires targeted education and awareness programs. Healthcare professionals, educators, and community leaders must challenge misconceptions and promote inclusive environments. The review highlights the need for culturally sensitive interventions and further research on effective stigma-reduction strategies.

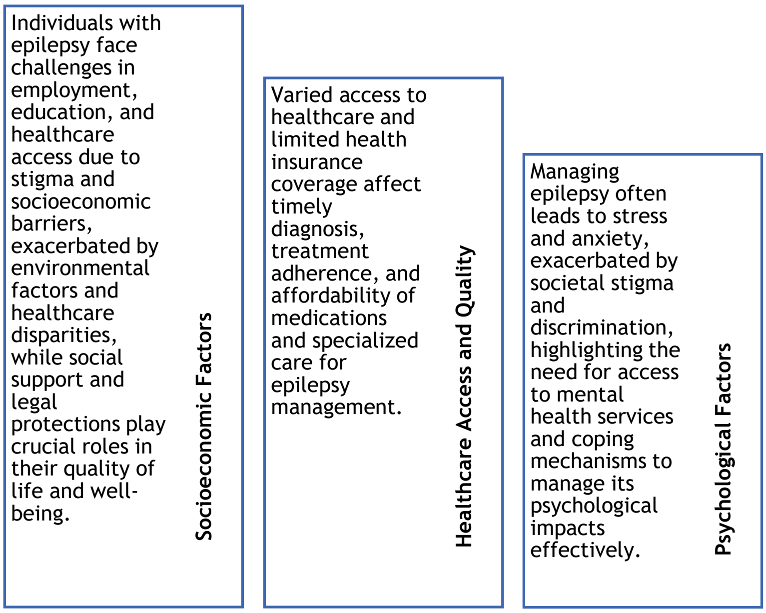
Introduction

Epilepsy is a chronic neurological disorder characterized by recurrent, unprovoked seizures. It affects millions worldwide, cutting across all age groups and demographics. Despite its prevalence, epilepsy remains one of the most misunderstood medical conditions, primarily due to persistent misconceptions and cultural beliefs. These misconceptions often stem from a lack of education and awareness, leading to stigma and discrimination against individuals with epilepsy (PwE) (Gosain & Samanta, 2022; Yeni, 2023). Figure 1 below illustrates key areas that interact with epilepsy. Socioeconomic factors such as income, employment, and education significantly shape economic stability, healthcare access, and resource availability for individuals with epilepsy (Al-Dossari et al., 2018; Fisher et al., 2014).

Disparities in healthcare services and insurance coverage exacerbate challenges in the timely diagnosis, treatment adherence, and overall management of epilepsy, highlighting substantial gaps in healthcare access and affordability (Bensken, Alberti, Khan, et al., 2022Pellinen, 2022; Niu, Kobau, Zack, et al., 2022). In social and community contexts, social support is pivotal for treatment adherence and well-being, while stigma and discrimination contribute to social isolation and worsened mental health outcomes (Fisher et al., 2014; Brandt, Liu, Heim & Heinz, 2022). Health behaviors, influenced by socioeconomic factors and support systems, directly impact seizure control and overall health outcomes, underscoring the necessity for comprehensive management approaches (Lewinski, Shapiro, Gierisch, et al., 2020; WHO, 2024).

In many societies, epilepsy is incorrectly perceived as contagious, caused by supernatural forces, or indicative of mental illness or retardation (Gyaase, Gyaase, Tawiah, et al., 2023; Makasi, Kilale, Ngowi et al., 2023; Yeni, 2023). These beliefs can result in significant social and economic disadvantages for people with epilepsy (PwE), including exclusion from educational opportunities, discrimination, and social isolation (Fisher et al., 2014; Brandt, Liu, Heim & Heinz, 2022). For instance, in some communities, PwE is thought to be possessed by demons or spirits, leading to the use of traditional healers rather than medical treatment (Keikelame & Swartz, 2015; Nemathaga, Maputle, Makhado et al., 2023). Such views not only hinder effective medical intervention but also exacerbate the stigma associated with the condition.

Education systems often reflect these societal attitudes, with teachers and school administrators sometimes advocating for the segregation of children with epilepsy, believing they might negatively affect their peers (Makhado, Sepeng & Makhado, 2024). This segregation can severely impact these children's educational development and social integration. Furthermore, misconceptions held by family members and community leaders can influence broader societal attitudes, perpetuating a cycle of ignorance and stigma (Thomas & Nair, 2011; Makhado et al., 2023; Yeni, 2023). Efforts to address these issues through education and awareness programs are crucial. Healthcare professionals, educators, and community leaders must work together to challenge and change these outdated and harmful.



Socioeconomic Factors

Individuals with epilepsy face challenges in employment, education, and healthcare access due to stigma and socioeconomic barriers, exacerbated by environmental factors and healthcare disparities, while social support and legal protections play crucial roles in their quality of life and well-being.

Healthcare Access and Quality

Varied access to healthcare and limited health insurance coverage affect timely diagnosis, treatment adherence, and affordability of medications and specialized care for epilepsy management.

Psychological Factors

Managing epilepsy often leads to stress and anxiety, exacerbated by societal stigma and discrimination, highlighting the need for access to mental health services and coping mechanisms to manage its psychological impacts effectively.

Figure 1. Select factors associated with epilepsy.

Epilepsy is a neurological condition characterized by recurrent seizures affecting individuals globally. Despite medical advances, misconceptions and stigmatization surrounding epilepsy persist, social integration and quality of life for those affected. A systematic review of existing literature will be conducted to achieve these aims. Relevant studies from various countries and cultural settings will be identified through comprehensive searches of electronic databases such as PubMed, Scopus, and PsycINFO. Keywords related to epilepsy, stigma, cultural beliefs, and attitudes will be used to identify relevant studies. Inclusion criteria will encompass studies published in peer-reviewed journals from 2010 to 2023 focusing on societal attitudes towards epilepsy, including qualitative and quantitative analyses. Data extraction will involve synthesizing findings related to perceptions of epilepsy, prevalent misconceptions, and their impact on PwE's lives (Mayor, Gunn, Reuber, et al., 2021; Makasi, Kilale, Ngowi, et al., 2023). This study will contribute to a better understanding of the cultural and societal factors influencing stigma towards epilepsy globally. The findings will inform targeted educational and awareness initiatives to challenge misconceptions and promote inclusivity, ultimately enhancing the quality of life and opportunities for individuals with epilepsy.

Literature Review

Epilepsy, a neurological disorder characterized by recurrent seizures, is often misunderstood and stigmatized in various societies. In Mali, a community study by Maiga et al. (2014) found that a significant portion of the population believed epilepsy was contagious (66%), caused by a supernatural power (53%) and that the first option for treatment should be traditional healers (63%). Similarly, in Nigeria, Owolabi et al. (2014) reported that among teachers, 25.5% would not want a child with epilepsy in their classroom, and 60% believed children with epilepsy should be in separate classes. Bhesania, Rehman, Savul, and Zehra (2014) in Pakistan found that 14.5% of teachers thought epilepsy was contagious, 34.5% believed it caused mental retardation, and 10.9% attributed it to supernatural causes.

In Saudi Arabia, Abulhamail et al. (2014) revealed mixed beliefs among teachers, with 47% thinking children with epilepsy may show abnormal behavior in the classroom, 28% believing they should be educated in separate classes, and 25% perceiving them as having lower intelligence. In Egypt, Shehata and Mahran (2014) conducted a study involving 2,198 students without epilepsy. Their findings revealed significant misconceptions and stigmatizing attitudes towards PwE. Specifically, 28.4% of the students believed that individuals with epilepsy should not marry, reflecting a prevalent societal bias. Additionally, an overwhelming 92% of the participants expressed a refusal to marry someone with epilepsy, highlighting the extensive stigma and discrimination faced by PwE in social and marital contexts.

In Nigeria, community attitudes toward individuals with epilepsy, as detailed by Ezeala-Adikaibe et al. (2014), reveal a complex picture. While 61.8% of respondents acknowledged that it is acceptable for people with epilepsy to marry, a significant majority—93.2%—would refrain from marrying them themselves. Furthermore, 87.2% of respondents would prevent individuals with epilepsy from having children, and 72.8% would disallow them from forming new relationships through work or recreational activities. Another study in Nigeria by Eze et al. (2015) found that 86.3% of teachers believed students with epilepsy caused problems in the classroom, 41.2% thought they should be sent to private schools, and 51.3% would not want their child in the same class as a child with epilepsy.

A study by Karimi and Akbarian (2015) conducted in northern Iran revealed that family members of individuals with epilepsy generally demonstrated a good understanding and positive attitudes toward the condition. However, the study also found that 87.1% of respondents recognized epilepsy as a brain disorder, while 31.5% identified it as an inherited condition. The study also reported that family members of PwE believed epilepsy was caused by supernatural powers (8.1%), individuals with epilepsy should not marry (15.3%), and they had lower intelligence (25%). Several studies have identified misconceptions about epilepsy being contagious. For example, Abbas and Babikar (2011) found that a significant portion of people still believe epilepsy is a contagious illness. Similarly, a study conducted by Bekiroğlu N., Özkan R., and Gürses et al. (2004) in Istanbul highlighted that, although epilepsy is a treatable condition, many people hold incorrect beliefs about it. In our study, 65.8% of respondents accurately recognized that when seizures are managed with medication, individuals with epilepsy are just like anyone else. Table 1 provides a summary of additional studies that report epilepsy as being perceived as contagious.

Table 1. Contagion Perceptions of Epilepsy Across Various Studies

Country	Percentage Believing Epilepsy is Contagious/Infectious
Mali	66%
Pakistan	14.5%
Kuwait	18%
Uganda	17%
Saudi Arabia	11.2%

Source: *Maiga et al., 2014; Homi Bhesania et al., 2014; Al-Hashemi et al., 2016; Kaddumukasa et al., 2018; Al-Dossari et al., 2018*

Gebrewold et al. (2016) in Ethiopia found high levels of stigma among teachers, with 81% not preferring to have a child with epilepsy in their class, 80% not letting their child play with someone with epilepsy, and 92.5% not allowing their child to marry someone with epilepsy. Masri et al. (2017) in Jordan found that 10% of parents of PwE believed epilepsy was a mental illness, and 59% would not allow their child to participate in sports activities. In Uganda, Kaddumukasa et al. (2018) found that 17% of the community believed epilepsy was an infectious disease, 19.1% would not let their child play with a child with epilepsy, and 41.6% would not allow a close relative to marry someone with epilepsy.

Al-Dossari et al. (2018) in Saudi Arabia found that 46.5% believed epilepsy was caused by possession by demons or an evil spirit, 11.2% thought it was an infectious disease, and 13.7% believed women with epilepsy should not marry. The studies reviewed highlight pervasive misconceptions and stigmatizing attitudes toward epilepsy across various countries and populations. Common themes include beliefs in supernatural causes, concerns about contagion, and preferences for segregating or isolating individuals with epilepsy. These attitudes significantly impact PwE's social integration, education, and employment opportunities.

Key interventions

Based on the literature review on attitudes towards epilepsy and interventions to reduce stigma, several critical interventions can be grouped into thematic categories. These themes reflect the comprehensive approach needed to address stigma and improve the quality of life for individuals with epilepsy.

Education and Awareness

To effectively combat the stigma surrounding epilepsy, a multifaceted approach is essential. Implementing educational programs in schools is crucial, as highlighted by Owolabi et al. (2014) and Al-Hashemi et al. (2016). These programs should educate teachers and students alike on epilepsy—its causes, treatments, and how to support peers within an inclusive environment. Simultaneously, public awareness campaigns, as advocated by Alamri & Al-Thobaity (2020) and Maiga et al. (2014), should be launched across various media channels (TV, radio, and social media). These campaigns aim to dispel prevalent myths and misconceptions about epilepsy, fostering broader understanding and acceptance within communities. These initiatives target families, community leaders, and healthcare providers, addressing cultural beliefs surrounding epilepsy and promoting inclusive attitudes.

Advocacy and Support

To combat stigma and improve societal support for individuals with epilepsy, advocating for their rights through empowered advocacy groups is crucial, as highlighted by Atadzhanov et al. (2010) and Fisher et al. (2014). These groups play a vital role in raising awareness, challenging discriminatory practices, and promoting inclusive policies. Additionally, establishing peer support programs, as recommended by Gertie Makhado and Makhado (2024), is essential. These programs provide platforms for individuals with epilepsy to share experiences, offer mutual support, and collectively advocate for their needs in education and employment settings.

Policy and Legal Reforms

Advocating for policy development is crucial to safeguarding the rights of individuals with epilepsy across various domains, including education, employment, and social settings, as emphasized by the

World Health Organization (WHO) (2019). These policies should ensure equal opportunities and combat discrimination effectively. Simultaneously, lobbying for legislative changes is essential. Such changes can enforce anti-discrimination laws, guarantee access to healthcare services, and promote inclusive employment practices for people with epilepsy.

Healthcare System Improvements

To enhance support for individuals with epilepsy, comprehensive interventions should include training for healthcare professionals to improve their understanding of epilepsy and communication skills, as emphasized by Fisher et al. (2014) and Al-Dossari et al. (2018). This training would enable healthcare providers to deliver patient-centered care effectively, addressing the specific needs and concerns of patients with epilepsy. Additionally, ensuring access to accessible and affordable healthcare services is critical, particularly in underserved communities. WHO (2019) and Pellinen (2022) underscore the importance of providing comprehensive healthcare services for epilepsy, including diagnosis, treatment, and ongoing management. Improving access to these services will reduce barriers to care, leading to better health outcomes and quality of life for individuals with epilepsy, while integrating these efforts will foster a more supportive healthcare environment that prioritizes the needs of epilepsy patients and promotes equitable access to essential services.

Cultural Sensitivity and Inclusion

To foster a more inclusive society for individuals with epilepsy, cultural competence training for educators, healthcare providers, and community leaders is essential, as highlighted by Maiga et al. (2014) and Al-Hashemi et al. (2016). This training will equip them with the knowledge and skills to understand and respect diverse cultural beliefs surrounding epilepsy, improving service delivery and support for affected individuals. Simultaneously, promoting inclusive policies across schools, workplaces, and community settings is crucial. Makhado et al. (2023) underscore the importance of such policies in accommodating the needs of individuals with epilepsy. These policies ensure equal access to education, employment opportunities, and community participation by preventing segregation and discrimination based on their condition. Emphasizing both cultural competence training and inclusive policy promotion will contribute to creating supportive environments where individuals with epilepsy can thrive with dignity and equality.

Research Design and Methodology

A systematic review of existing literature will be conducted to achieve these aims. Relevant studies from various countries and cultural settings will be identified through comprehensive searches of electronic databases such as PubMed, Scopus, and PsycINFO. Keywords related to epilepsy, stigma, cultural beliefs, and attitudes will be used to identify relevant studies. Inclusion criteria will encompass studies published in peer-reviewed journals from 2010 to 2023 focusing on societal attitudes towards epilepsy, including qualitative and quantitative analyses. Data extraction will involve synthesizing findings related to perceptions of epilepsy, prevalent misconceptions, and their impact on PwE's lives (Mayor, Gunn, Reuber, et al., 2021; Makasi, Kilale, Ngowi, et al., 2023).

Findings and Discussion

Research and Evaluation

To enhance support for individuals with epilepsy, it is essential to promote research initiatives that deepen our understanding of societal attitudes towards epilepsy, evaluate intervention effectiveness, and develop new strategies to mitigate stigma and enhance quality of life. Moreover, establishing robust monitoring and evaluation frameworks is crucial. Fisher et al. (2014) and the WHO (2019) emphasize the importance of ongoing evaluation to assess the impact of interventions on reducing stigma, increasing awareness, and improving social integration for individuals with epilepsy.

Role of Governments, Society, and Families

Governments, society, and families play pivotal roles in shaping attitudes towards epilepsy and implementing effective interventions to reduce stigma and improve the quality of life for individuals living with the condition.

Government Initiatives

Governments are responsible for enacting policies that protect the rights of individuals with epilepsy across various domains. This includes advocating for inclusive education policies that ensure students with epilepsy receive the necessary support in mainstream schools. Legislative efforts to enforce anti-discrimination laws are crucial in combatting societal prejudices and ensuring equal opportunities in employment and social integration (WHO, 2019). Furthermore, governments can allocate resources to support healthcare services tailored to epilepsy management, ensuring accessibility and affordability for all individuals, regardless of socio-economic status (WHO, 2019).

Role of Society

Societal attitudes towards epilepsy heavily influence the quality of life and opportunities available to individuals with the condition. Educational campaigns and community workshops are essential in debunking myths and misconceptions surrounding epilepsy (Maiga et al., 2014; Karimi & Akbarian, 2016). Advocacy groups and peer support networks provide platforms for individuals with epilepsy and their families to advocate for their rights, raise awareness, and challenge discriminatory practices in society (Atadzhanov et al., 2010; Fisher et al., 2014).

Family Support and Education

Within the family unit, support and education are fundamental in shaping perceptions of epilepsy and facilitating the well-being of individuals with the condition. Families are crucial in providing emotional support, advocating for their loved one's needs, and ensuring they receive appropriate medical care. Educating family members about epilepsy, its causes, and treatment options helps dispel fears and misconceptions, fostering a supportive home environment (Karimi & Akbarian, 2016). Promoting open dialogue and understanding within families can empower individuals with epilepsy and help them feel integrated into familial and societal contexts, improving their overall quality of life (Fisher et al., 2014).

Conclusion

Epilepsy is a major global health issue, worsened by misconceptions and stigma across cultures. This review highlights widespread myths that label epilepsy as contagious, caused by supernatural forces, or linked to mental illness, which contribute to social exclusion and limited opportunities. The findings emphasize the need for targeted educational campaigns to correct these misconceptions, promote accurate understanding, and improve the quality of life for individuals with epilepsy. Healthcare professionals, educators, policymakers, and community leaders must work together to create inclusive environments. Future efforts should focus on culturally sensitive strategies that advocate education and policy changes to reduce stigma and increase societal acceptance.

References

Abbas, I. M., & Babikar, H. E. (2011). Knowledge, practice, and attitude toward epilepsy among primary and secondary school teachers in South Gezira locality, Gezira State, Sudan. Journal of Family and Community Medicine, 18(1), 17-21. https://doi.org/10.4103/1319-1683.78633

Al-Dossari, K. K., Al-Ghamdi, S., Al-Zahrani, J., Abdulmajeed, I., Alotaibi, M., Almutairi, H., BinSwilim, A., & Alhatlan, O. (2018). Public knowledge, awareness, and attitudes toward epilepsy in Al-Kharj Governorate, Saudi Arabia. Journal of Family Medicine and Primary Care, 7(1), 184-190. https://doi.org/10.4103/jfmpc.jfmpc_281_17

Al-Hashemi, E., Ashkanani, A., Al-Qattan, H., Mahmoud, A., Al-Kabbani, M., Al-Juhaidli, A., Jaafar, A., & Al-Hashemi, Z. (2016). Knowledge about epilepsy and attitudes toward students with epilepsy among middle and high school teachers in Kuwait. International Journal of Pediatrics, 2016, Article 5138952. https://doi.org/10.1155/2016/5138952

Almarwani, B., Alqelaiti, E., Aljohani, A., Abuanq, L., Alhujaili, R., & Aljohani, R. (2023). Knowledge and attitude about epilepsy among school teachers in Madinah, Saudi Arabia. Cureus, 15(9), e44572. https://doi.org/10.7759/cureus.44572

Atadzhanov, M., Haworth, A., Chomba, E., Mbewe, E., & Birbeck, G. L. (2010). Epilepsy-associated stigma in Zambia: What factors predict greater felt stigma in a highly stigmatized population? Epilepsy & Behaviour, 19(3), 414-418. https://doi.org/10.1016/j.yebeh.2010.07.004

Bekiroğlu, N., Özkan, R., Gürses, C., Arpacı, B., & Dervent, A. (2004). A study on awareness and attitude of teachers on epilepsy in Istanbul. Seizure, 13(7), 517-522. https://doi.org/10.1016/j.seizure.2003.12.007

Bensken, W. P., Alberti, P. M., Khan, O. I., Williams, S. M., Stange, K. C., Fernandez-Baca Vaca, G., Jobst, B. C., Sajatovic, M., & Koroukian, S. M. (2022). A framework for health equity in people living with epilepsy. Epilepsy Research, 188, 107038. https://doi.org/10.1016/j.eplepsyres.2022.107038

Bhesania, N. H., Rehman, A., Savul, I. S., & Zehra, N. (2014). Knowledge, attitude, and practices of school teachers towards epileptic school children in Karachi, Pakistan. Pakistan Journal of Medical Sciences, 30(1), 220-224. https://doi.org/10.12669/pjms.301.4307

Brandt, L., Liu, S., Heim, C., & Heinz, A. (2022). The effects of social isolation stress and discrimination on mental health. Translational Psychiatry, 12. https://doi.org/10.1038/s41398-022-02178-4

Eze, C. N., Ebuehi, O. M., Brigo, F., Otte, W. M., & Igwe, S. C. (2015). Effect of health education on trainee teachers' knowledge, attitudes, and first aid management of epilepsy: An interventional study. Seizure, 33, 46-53. https://doi.org/10.1016/j.seizure.2015.08.006

Ezeala-Adikaibe, B. A., Achor, J. U., Nwabueze, A. C., Agomoh, A. O., Chikani, M., Ekenze, O. S., Onwuekwe, I. O., & Orakwue, M. (2014). Knowledge, attitude, and practice of epilepsy among community residents in Enugu, Southeast Nigeria. Seizure, 23(10), 882-888. https://doi.org/10.1016/j.seizure.2014.08.003

Fisher, R. S., Acevedo, C., Arzimanoglou, A., Bogacz, A., Cross, J. H., Elger, C. E., ... & Wiebe, S. (2014). ILAE official report: A practical clinical definition of epilepsy. Epilepsia, 55(4), 475-482. https://doi.org/10.1111/epi.12550

Gebrewold, M. A., Enquselassie, F., Teklehaimanot, R., & Gugssa, S. A. (2016). Ethiopian teachers: Their knowledge, attitude, and practice towards epilepsy. BMC Neurology, 16, 167. https://doi.org/10.1186/s12883-016-0665-6

Gertie Makhado, T., & Makhado, L. (2024). Perspective chapter: Stigma and its impact on people living with epilepsy in rural communities. IntechOpen. https://doi.org/10.5772/intechopen.112867

Gosain, K., & Samanta, T. (2022). Understanding the role of stigma and misconceptions in the experience of epilepsy in India: Findings from a mixed-methods study. Frontiers in Sociology, 7. https://doi.org/10.3389/fsoc.2022.790145

Gyaase, D., Gyaase, T. I., Tawiah, R., Atta-Osei, G., Owusu, I., Mprah, W. K., & Enuameh, Y. A. (2023). Perceived causes and management of epilepsy among rural community dwellers in Ghana: A qualitative synthesis. Frontiers in Neurology, 14. https://doi.org/10.3389/fneur.2023.1230336

Karimi, N., & Akbarian, S. A. (2015). Knowledge and attitude toward epilepsy of close family members of people with epilepsy in North of Iran. Advances in Medicine, 2016, Article 8672853. https://doi.org/10.1155/2016/8672853

Karimi, N., & Akbarian, S. A. (2016). Knowledge and attitude toward epilepsy of close family members of people with epilepsy in North of Iran. Advances in Medicine, 2016, Article 8672853. https://doi.org/10.1155/2016/8672853

Kaddumukasa, M., Kaddumukasa, M. N., Buwembo, W., Munabi, I. G., Blixen, C., Lhatoo, S., Sewankambo, N., Katabira, E., & Sajatovic, M. (2018). Epilepsy misconceptions and stigma reduction interventions in sub-Saharan Africa: A systematic review. Epilepsy & Behavior, 85, 21-31. https://doi.org/10.1016/j.yebeh.2018.04.014

Lewinski, A. A., Shapiro, A., Gierisch, J. M., Goldstein, K. M., Blalock, D. V., Luedke, M. W., Gordon, A. M., Bosworth, H. B., Drake, C., Lewis, J. D., Sinha, S. R., Husain, A. M., Tran, T. T., & Van Noord, M. G. (2020). Barriers and facilitators to implementation of epilepsy self-management programs: A systematic review using qualitative evidence synthesis methods. Systematic Reviews, 9. https://doi.org/10.1186/s13643-020-01322-9

Maiga, Y., Albakaye, M., Diallo, L. L., Diop, M. S., Menta, I., Traoré, S., ... & Dème, H. (2014). Community knowledge, attitudes, and practices regarding epilepsy in Mali. Epilepsy & Behavior, 33, 115-121. https://doi.org/10.1016/j.yebeh.2014.02.009

Makasi, C. E., Kilale, A. M., Ngowi, B. J., Lema, Y., Katiti, V., Mahande, M. J., Msoka, E. F., Stelzle, D., Winkler, A. S., & Mmbaga, B. T. (2023). Knowledge and misconceptions about epilepsy among people with epilepsy and their caregivers attending mental health clinics: A qualitative study in Taenia solium endemic pig-keeping communities in Tanzania. Epilepsy Open, 8(2), 487-496. https://doi.org/10.1002/epi4.12720

Makhado, T. G., Sepeng, N. V., & Makhado, L. (2024). A systematic review of the effectiveness of epilepsy education programs on knowledge, attitudes, and skills among primary school learners. Frontiers in Neurology, 15. https://doi.org/10.3389/fneur.2024.1356920

Mayor, R., Gunn, S., Reuber, M., & Simpson, J. (2021). Experiences of stigma in people with epilepsy: A meta-synthesis of qualitative evidence. Seizure, 94, 142-160. https://doi.org/10.1016/j.seizure.2021.11.021

Nemathaga, M., Maputle, M. S., Makhado, L., & Mashau, N. S. (2023). Diagnosis of epilepsy by traditional healers and its effect on access to care and disease management: A qualitative study. Neuropsychiatric Disease and Treatment, 19, 973-983. https://doi.org/10.2147/NDT.S392479

Niu, T., Kobau, R., Zack, M. M., & Greenlund, K. J. (2022). Barriers to and disparities in access to health care among adults aged ≥18 years with epilepsy — United States, 2015 and 2017. Morbidity and Mortality Weekly Report (MMWR), 71(21), 697-702.

Owolabi, L. F., Shehu, N. M., & Owolabi, S. D. (2014). Teachers' perception about epilepsy in Nigerian children. Journal of Pediatric Neurosciences, 9(2), 103-107. https://doi.org/10.4103/1817-1745.139286

Owolabi, L. F., Shehu, N. M., & Owolabi, S. D. (2014). Epilepsy and education in developing countries: A survey of school teachers' knowledge about epilepsy and their attitude towards students with epilepsy in Northwestern Nigeria. The Pan African Medical Journal, 18. https://doi.org/10.11604/pamj.2014.18.255.3607

Pellinen, J. (2022). Treatment gaps in epilepsy. Frontiers in Epidemiology, 2. https://doi.org/10.3389/fepid.2022.976039

Shehata, G. A., & Mahran, D. G. (2011). Knowledge and attitude of epilepsy among secondary school students (epileptic and non-epileptic) in Assiut City, Egypt. Epilepsy Research, 95(1-2), 130-135. https://doi.org/10.1016/j.eplepsyres.2011.03.011

Thomas, S. V., & Nair, A. (2011). Confronting the stigma of epilepsy. Annals of Indian Academy of Neurology, 14(3), 158-163. https://doi.org/10.4103/0972-2327.85873

World Health Organization. (2019). Epilepsy: A public health imperative. World Health Organization. https://www.who.int/publications/i/item/epilepsy-a-public-health-imperative

World Health Organization. (2024, February 7). Epilepsy. Retrieved from https://www.who.int/news-room/fact-sheets/detail/epilepsy

Yeni, K. (2023). Stigma and psychosocial problems in patients with epilepsy. Exploratory Neuroscience, 2, 251-263. https://doi.org/10.37349/en.2023.00026