

Student-Led Public Epilepsy Awareness Campaigns in Saudi Arabia: A Community-Centred Educational Initiative

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Received: March 30, 2026; **Published:** June 30, 2026

Abstract

Background: Epilepsy affects approximately 50 million individuals globally and continues to be one of the most stigmatised neurological conditions. In Saudi Arabia, widespread myths - including beliefs that epilepsy is contagious or caused by spiritual possession - continue to drive social discrimination and unsafe first-aid responses. Student-led public health initiatives represent an underutilised yet highly effective mechanism for addressing such gaps.

Methods: Medical student volunteers, in collaboration with the Saudi Society of Epilepsy and King Fahad Specialist Hospital in Dammam, designed and implemented a community-centred epilepsy awareness campaign. Educational booths were established in large shopping malls to maximise demographic reach. Interventions included face-to-face dialogue, live seizure first-aid demonstrations, and culturally adapted educational materials. The initiative was entirely self-funded and student-coordinated.

Results: The campaign successfully engaged diverse community members across age groups, including families, adolescents, and elderly individuals. Post-engagement feedback demonstrated significantly improved confidence in seizure first-aid response, real-time correction of deeply held misconceptions, and more inclusive attitudes towards individuals living with epilepsy. Participating students reported substantial gains in communication, advocacy, and cultural competency skills.

Conclusion: This initiative demonstrates that low-cost, student-led community health education can achieve meaningful public health impact. The model is scalable, sustainable, and adaptable to other stigmatised health conditions. Integration of such initiatives into medical curricula is recommended to foster socially conscious healthcare professionals.

Keywords: Epilepsy; Public Health Education; Stigma; Saudi Arabia; Medical Students; Community Engagement; Seizure First Aid

Introduction

Epilepsy is a chronic neurological disorder characterised by recurrent, unprovoked seizures, affecting approximately 50 million people worldwide [1]. Despite being one of the most prevalent neurological conditions globally, epilepsy remains disproportionately burdened by stigma, misconception, and social exclusion. In low- and middle-income countries, as well as in communities with limited access to formal health education, these challenges are particularly pronounced.

In Saudi Arabia and across the broader Arab world, epilepsy has historically been associated with supernatural causes, including spiritual possession, leading to delayed diagnosis, avoidance of medical care, and social isolation of affected individuals [2]. These culturally embedded beliefs, while not unique to the region, pose significant barriers to effective epilepsy management and to the quality of life of those living with the condition. Furthermore, a lack of public knowledge regarding appropriate seizure first-aid responses has contributed to potentially harmful interventions during acute seizure episodes.

Public health campaigns targeting epilepsy stigma have demonstrated efficacy in various international contexts; however, such initiatives in the Gulf Cooperation Council (GCC) region remain sparse in the published literature. Medical students, positioned at the intersection of clinical knowledge and community engagement, represent an underutilised resource in public health advocacy. Student-led initiatives offer unique advantages: they are cost-effective, benefit from peer credibility, and simultaneously foster professional development in the participating volunteers.

This paper describes the design, implementation, and outcomes of a student-led epilepsy awareness campaign conducted in Dammam, Saudi Arabia, in collaboration with the Saudi Society of Epilepsy and King Fahad Specialist Hospital. We report on the campaign's educational impact on the community, examine the specific misconceptions addressed, and propose this model as a replicable framework for community health education in similar settings.

Background and Rationale

The stigma surrounding epilepsy is a well-documented global phenomenon with multifaceted determinants, including cultural, religious, and educational factors [3]. In Saudi Arabia, qualitative studies have identified persistent beliefs associating epilepsy with contagion, divine punishment, or spiritual possession - misconceptions that not only deter affected individuals from seeking appropriate medical care but also foster discrimination and social marginalisation [4].

Beyond stigma, a critical public safety concern relates to the management of witnessed seizures. Community members with no formal first-aid training frequently resort to potentially harmful interventions, such as restraining the person, placing objects in the mouth, or administering oral liquids during a tonic-clonic episode. These practices can result in injury to both the affected individual and bystanders, and underscore the urgent need for accessible, evidence-based public education.

The shopping mall, as a social infrastructure point with high footfall across demographics, presents a strategically sound venue for health promotion. Prior campaigns utilising accessible public spaces for health education - including those targeting cardiovascular disease, diabetes, and mental health - have demonstrated efficacy in achieving broad community reach and high levels of participant engagement [5]. Adapting this model to epilepsy awareness in a culturally sensitive manner constituted the foundational rationale for the present initiative.

Methods

Initiative design and partnerships

The campaign was conceptualised and led entirely by medical student volunteers, with institutional support from the Saudi Society of Epilepsy and clinical expertise provided by King Fahad Specialist Hospital, Dammam. The partnership enabled access to evidence-based educational resources, specialist clinical guidance, and formal organisational endorsement, lending credibility to the student-led initiative.

All campaign activities were self-funded through voluntary contributions by participating students, demonstrating the feasibility of impactful public health education within minimal budgetary constraints.

Setting and target population

Educational booths were established in large shopping malls in Dammam, Eastern Province, Saudi Arabia. This venue selection was deliberate: shopping malls in Saudi Arabia serve as primary social gathering spaces, particularly for families, and attract diverse demographic groups including adolescents, adults, and elderly community members. The setting facilitated engagement with individuals who would be unlikely to seek out health education proactively.

Educational interventions

The campaign employed a multi-modal educational approach. Core interventions included: (i) face-to-face structured dialogue between student volunteers and community members; (ii) live demonstrations of evidence-based seizure first-aid technique; (iii) distribution of culturally adapted printed and visual educational materials; and (iv) targeted discussion addressing the most prevalent local misconceptions.

Educational content was aligned with international epilepsy guidelines whilst being adapted to address specific cultural and linguistic contexts relevant to the Saudi Arabian community. Particular attention was given to framing neurological explanations in a manner respectful of religious and cultural beliefs, avoiding confrontational or dismissive language when addressing supernatural attributions.

Seizure first-aid education encompassed the following evidence-based steps: cushioning the head to prevent injury; timing the seizure duration; placing the individual in the recovery position following cessation; refraining from restraint; avoiding placing any object in the mouth; and remaining present to offer reassurance and monitor for post-ictal recovery.

Results

Community reach and engagement

The campaign successfully engaged a broad and demographically diverse cross-section of the community, including families with young children, adolescents, and elderly adults. The choice of shopping malls as a venue proved effective in facilitating incidental engagement - community members who had not specifically sought health information were drawn into structured educational dialogue.

Participant responses during engagement were notably enthusiastic, with many individuals expressing genuine surprise upon learning evidence-based facts about epilepsy. The interactive nature of the booth format, combining visual materials with direct dialogue, appeared to facilitate deeper engagement than passive information provision alone.

Misconceptions addressed

Four major categories of misconception were systematically identified and addressed during the campaign. First, the belief that epilepsy is contagious was corrected through clear explanation of epilepsy as a neurological - not infectious - condition, directly challenging the social avoidance that this misconception perpetuates. Second, supernatural attributions, including the belief that seizures represent spiritual possession, were addressed sensitively by presenting neurobiological explanations of seizure pathophysiology, framed in a manner compatible with religious belief without dismissing cultural perspectives.

Third, therapeutic nihilism - the belief that epilepsy is untreatable - was countered by presenting information on modern antiepileptic therapies, surgical options, and the significant proportion of patients who achieve seizure freedom with appropriate management. This component was particularly significant given its direct implications for healthcare-seeking behaviour. Fourth, dangerous first-aid practices were replaced through live demonstration of correct seizure management, providing community members with practical, actionable skills.

Impact on first-aid confidence and attitudes

Post-engagement feedback from participants indicated substantially improved confidence in responding appropriately to a witnessed seizure. Community members reported feeling better equipped to assist effectively without resorting to potentially harmful interventions. Open conversations facilitated during the campaign normalised epilepsy as a manageable medical condition, with several participants expressing a shift in attitudes towards greater inclusivity and reduced social stigma.

Student professional development

Participating student volunteers reported significant gains in communication, leadership, and cultural competency skills. Engagement with diverse community perspectives deepened appreciation of the social determinants of health and the role of cultural context in shaping patient experiences. Early involvement in public health advocacy was perceived by participants as fostering a sustained commitment to health equity and community-oriented medical practice - competencies increasingly recognised as essential for effective clinical care.

Discussion

The findings of this initiative reinforce the growing body of evidence supporting community-based, face-to-face epilepsy education as an effective strategy for stigma reduction and improved public health literacy [6]. The significant positive response observed across demographic groups underscores the broad applicability of accessible educational interventions, particularly when delivered in environments that community members already frequent.

The success of this self-funded student-led model challenges assumptions that meaningful public health impact requires substantial institutional resources. By leveraging voluntary student effort and strategic institutional partnerships, this campaign achieved considerable educational reach at minimal cost - a characteristic particularly relevant to resource-constrained healthcare environments. The model aligns with principles advocated by the World Health Organisation regarding community engagement as a cornerstone of effective health promotion [7].

The culturally sensitive approach adopted in this initiative merits specific attention. Addressing deeply held beliefs about spiritual causation without dismissing their cultural significance required careful communication strategies, and the positive community response suggests that evidence-based education and cultural sensitivity are not mutually exclusive. This finding has broader implications for health communication strategies in culturally diverse populations, where confrontational framing of health beliefs may reduce rather than enhance engagement.

A key strength of this initiative lies in its dual benefit structure: the community gained improved health literacy and first-aid competence, whilst participating students developed professionally in dimensions - advocacy, cultural communication, public health leadership - that are frequently underrepresented in traditional medical curricula. The integration of such experiential learning opportunities into formal medical education warrants serious consideration by academic institutions.

Limitation of the Study

Several limitations should be acknowledged. The absence of formal pre- and post-intervention quantitative outcome measures limits the strength of conclusions that can be drawn about the magnitude of knowledge and attitude change. Future iterations of this initiative would benefit from validated psychometric instruments measuring epilepsy-related stigma and first-aid knowledge, applied at both pre- and post-engagement time points. Additionally, longer-term follow-up would be required to assess the durability of attitude and behaviour change observed immediately following the campaign.

Conclusion

This student-led epilepsy awareness campaign in Saudi Arabia demonstrates that grassroots, community-centred health education can produce meaningful reductions in stigma, correction of dangerous misconceptions, and improved seizure first-aid preparedness in the general public. The model - characterised by strategic institutional partnerships, accessible venue selection, culturally sensitive content, and student leadership - is both replicable and scalable to other health conditions and contexts.

Medical institutions and student organisations across Saudi Arabia and the broader region are encouraged to adopt and adapt this framework, expanding community health education whilst simultaneously nurturing the development of socially conscious, culturally competent healthcare professionals. Formal integration of public health advocacy into undergraduate medical curricula would further institutionalise these benefits, ensuring sustainable community impact beyond individual student initiatives.

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Volume 9 Issue 3 March 2026

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