

Knowledge, Attitude, and Practice among Practitioners Regarding Epilepsy in Bhutan: A Rural and a Remote Country

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ABSTRACT

Purpose: Epilepsy is a major neurological disorder with many countries as scientifically silent and little-to-nothing known on various aspects of epilepsy. **Methods:** Taking background of a first multinational seminar on epilepsy in Bhutan and a short valid questionnaire pertaining to various aspects of epilepsy, before participation. **Results:** Large participation was achieved (76 out of 87 approached, 87.3%; 53.0% males). Based on the responses of 76.0% lecturers and clinician and medical administration, 21.0% nurses, and 3.0% traditional practitioners, important derivations were obtained: positively, (a) event provided at least an opportunity to bring service providers at a common platform toward initiating particular epilepsy goals, (b) none regarded epilepsy as contagious or due to past sins, (c) all responded favorably to that “they found this event useful” and “this event added something meaningful to them personally or professionally,” (d) large participation indicated acceptance, need, and common interest among a number of stakeholders. Negatively, significant knowledge-deficit was noted: for 38.4% electroencephalogram is essential for diagnosis, 48.0% responded with incorrect definition of epilepsy, etc. **Conclusions:** Events, such as this, provides, for scientifically silent countries, basis for not only bringing service providers to a common platform but also to discuss to initiate particular epilepsy goals, to provide additional professional knowledge for strengthening service development, and to determine need and social acceptance around epilepsy. Important knowledge deficit was identified which cannot be fully explained through lack of time or limited training. There might be a need to reappraise the approach to teaching medical professionals about epilepsy.

KEYWORDS: *Asia, Bhutan, epidemiology, epilepsy*

INTRODUCTION

Epilepsy is a major neurological disorder and is of particular relevance to Asia, for multitude of reasons.^[1] To say the least, epilepsy remains misunderstood and stigmatised, unfortunately as equally among practitioners as in public,^[2,3] mostly due to lack of information and systematic initiatives.^[4] Elsewhere in rural Asia, putting efforts to establish goal-oriented programs has been seen to benefit not only various stakeholders but also helped to establish epilepsy (and its services) systematically in the country.^[5-7] However, many countries remain scientifically-silent;^[1,8,9] implying yet-to-experience

broad outside attention and challenge less systematic fundamental initiatives. This short communication provides significant field knowledge and perspectives regarding epilepsy among practitioners of Bhutan, a rural and a remote country. This work is significant for the reasons of providing a cue for other countries as well as the fact that nothing-to-little is known on innumerable possible aspects of epilepsy in Bhutan.^[10]

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METHODS

A simple straightforward method was adopted wherein a first multinational seminar was organised on epilepsy in the country. Suitable advertising and advocacy was implemented to ensure broad participation by varying types of practitioners in the country. During this event in July 2016, participants were requested to answer a valid structured questionnaire on epilepsy that had questions on various aspects of epilepsy, before their participation.

Bhutan is a small landlocked low-middle income Asian country with a population of 757,042. It is 70.0% rural and 40.0% unpaved country. It has more males than females, has a median age of about 27 years, and most population is young (i.e., <65 years of age).^[11] For various reasons, these are important risk scenarios for epilepsy or its services.^[1,6] Bhutan has 100% cost-free medical services, no private service, parallel fully-functional traditional healing system, and 185 basic health units spread throughout this country. Through various efforts, the author is slowly establishing epilepsy information for this country (currently unpublished, D Bhalla 2017). It is estimated that there are about 4536 patients with lifetime epilepsy; with some provinces having as low as 22 lifetime epilepsy patients alone. This implies pending opportunities for epilepsy control through advocacy and research efforts.

RESULTS

Overall, a total of 87 different service providers were invited; of which 76 (87.3%) participants (forty males, 52.6%) attended this event. Of those present, 65 (85.5%) participants (37 males, 57.0%; lecturer/clinician/medical administration: $n = 49$, 75.3%; nurse: 14, 21.5%; traditional practitioners: 2, 3.0%) responded to the pre-event questionnaire.

Positively, none of the participants recognized epilepsy as contagious or epilepsy related to the past life or sins including traditional medicine participants. All participants responded favorably to the question “do you know what epilepsy is,” although it was clearly not the case. Negatively, for 25 (38.4%) participants, electroencephalogram (EEG) is essential for diagnosis of epilepsy, for 4 (6.1%) participants, inserting an object in the mouth is the first they would do if they see any epilepsy patient, 31 (47.6%) participants could not provide a correct definition of epilepsy, 58 (89.2%) participants could not recognise correct definition of active epilepsy, and 44 (67.6%) participants recommended modern treatment for epilepsy, whereas 13 (20.0%) recommended a mix of treatment (modern + traditional + prayer) and 2 (3.0%) recommended traditional treatment. Besides this,

clinician participants, over a period of past 3 calendar months, altogether had received 63 new epilepsy patients and 134 old epilepsy patients.

Following were the eventual subsequent goals/steps for which this event provided platform for:

To strengthen “public image” and position of epilepsy in the country, organize service providers of neurology into a formal association (and to make this into a novel country chapter of the international league against epilepsy); establish exchange in neurology with neighboring institution; organize similar events on yearly basis; submission of a report with professional recommendations on epilepsy (and neurology in general) to the health department; and establish formal systematic program on epilepsy to determine its prevalence and risk, psychosocial, and treatment aspects.

DISCUSSION

Our event generated large participation and therefore succeeded to produce acceptance and common interest among a number of local stakeholders. This can also be seen from the fact that all participants had responded favorably to the questions that they found “this event useful” and “this event added something meaningful to them personally or professionally.” Thus, it supports observations elsewhere that additional professional knowledge is always welcome for better service development and patient satisfaction from services.^[12,13]

By responding negatively that epilepsy is related to past life/sins or epilepsy being contagious may reflect a good sign of possible social acceptance of epilepsy in Bhutan; a common challenge in epilepsy,^[2] equally among public and practitioners.^[3] We may unconventionally explain the presence of this positive attitude through religion. Bhutan has Vajrayana Buddhism as its religion. In Muslim (or sorcery oriented) populations,^[2,14,15] large proportion of participants may predominantly attribute epilepsy as contagious or due to past sins because jinn possession (as instructed by *The Holy Quran*) may cause similar sudden physical movements as might be in epilepsy, which is difficult to differentiate between the two.^[16] Thus, contagiousness may not necessarily refer to mean actual transfer of epilepsy but transfer of jinn possession from one to another or transfer of underlying contagious epilepsy risk factors such as infection, from one to another, from which epilepsy may develop (and therefore spread likewise). These aspects may affect liberal social acceptance of epilepsy in Muslim populations. Like Bhutan, other countries such as Hong Kong, where Buddhism is dominant, demonstrate similar positive social attributes about

epilepsy,^[17] which may be due to the teachings of Lord Buddha, who states, “there is nothing about birth or social status that makes a person good or bad but solely in terms of their action and so that’s how they should be judged.”^[18] The concept of jinn possession is likely to be absent (or dissimilar in context and meaning) in Buddhism although this may also differ with the kind of Buddhism, a certain population has. The author could not find a reliable reference to this though.

Although all participants responded that they know what epilepsy is, it was clearly not the case, page 4. Only about half of them could provide an actual definition of epilepsy and what active epilepsy is had little understanding among most participants. EEG was also considered important for diagnosing epilepsy by a certain proportion of participants, page 4. This was despite the fact that 63 new and 134 old epilepsy patients were being managed by the clinicians here; therefore, there was supposedly a clinical exposure toward epilepsy already. The reasons for this knowledge deficit are difficult to elucidate since even those working in specialist surroundings reported inaccuracies. Nonetheless, medical students, general practitioners, and specialists of different populations are all reported to have significant knowledge deficit and high error rates on epilepsy,^[4,19-21] including western populations like France and the UK. Even though, limited time and undergraduate training are reported to be the major causes of knowledge deficit and errors^[3] in resource-poor populations, then why does this exist in apparent Western populations?^[19-21] Whatever reason might be, this knowledge deficit may have important negative repercussions on epilepsy patients.^[12] In complete contrast, elsewhere in rural Asia, the author, however, has noted excellent competence on epilepsy among provincial rural doctors who often work without any help or guidance (Field data, D Bhalla, 2015).

Perspectives for other populations

This work provides important perspectives for other countries as well. Firstly, advocacy, through a simple mechanism of conducting events in such scientifically silent countries, local stakeholders can be brought to one single platform. This not only help raise an interest toward epilepsy but also organizes service providers to create a possibility to work toward bringing epilepsy out-of-shadow, an international recognized goal. Secondly, service quality, events such as these may fulfill service providers pending needs on training since knowledge deficits are consistently present in almost all countries.^[3,19-21] This may directly impact service delivery in rural or remote locations where practitioners often have to work alone without any additional support (Field data, D Bhalla, 2015) and where rural

patients are likely to have peculiar and different issues than urban ones.^[22,23]

Highlights

There is a need to prioritize scientifically silent countries like Bhutan since important knowledge deficits on epilepsy may be present. On one hand, such knowledge deficits are not explainable through insufficient time and undergraduate training and therefore require the need to re-appraise the approach to teaching medical professionals about epilepsy. On other hand, such deficits can likely (and easily) be overcome through providing additional (structured, systematic, organized) professional knowledge. Contrary to widespread by-default beliefs against “public image” of epilepsy, in Bhutan, epilepsy is likely to be socially acceptable.

CONCLUSIONS

Organizing events, such as this, on epilepsy are important not just for building a favorable environment around epilepsy in scientifically silent countries but also for the need of additional professional development. Such efforts therefore should be appreciated. However, challenges for epilepsy care were also noted, particularly knowledge deficit. Plenty is left to understand epilepsy and its characteristics in this country for which values-based collaborations are invited.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Bhalla D, Tchalla AE, Marin B, Ngoongou EB, Tan CT, Preux PM, *et al.* Epilepsy: Asia versus Africa. *Epilepsia* 2014;55:1317-21.
2. Kassie GM, Kebede TM, Duguma BK. Knowledge, attitude, and practice of epileptic patients towards their illness and treatment in jimma university specialized hospital, Southwest Ethiopia. *N Am J Med Sci* 2014;6:383-90.
3. Danesi MA. Doctors’ perspectives on epilepsy in a developing country. *East Afr Med J* 1988;65:297-306.
4. Ekeh BC, Ekrikpo UE. The knowledge, attitude, and perception towards epilepsy amongst medical students in Uyo, Southern Nigeria. *Adv Med* 2015;2015:876135.
5. Bhalla D. Domestic Health Visiting: An Innovative Approach to Bridge Gaps in Epilepsy Care in Laos and Cambodia. Varetz, France; 2012.
6. Hun C, Hok T, Ros S, Chan S, Bhalla D. Epilepsy: Some controversies, some knowledge and some experience from Cambodia. *Neurol India* 2014;62:606-9.

7. Bhalla D. Epilepsy in Cambodia: Results and Perspectives. Ho Chi Minh, Vietnam: Impact Mental Health; 2011.
8. Bhalla D, Lotfalinezhad E, Timalsina U, Kapoor S, Kumar KS, Abdelrahman A, *et al.* A comprehensive review of epilepsy in the Arab World. *Seizure* 2016;34:54-9.
9. Bhalla D, Kapoor S, Kapoor A, Lotfalinezhad E, Amini F, Bhatta NK, *et al.* A first-ever dedicated comprehensive review of incidence of epilepsy in South America and Caribbean. *Int J Epilepsy* 2017;4:65-9.
10. Bhutan and (or) Epilepsy and (or) Neurology. National Library of Medicine; 2016.
11. GNHC. Bhutan Population Perspective Plan. Gross National Happiness Commission; 2011.
12. Chappell B, Smithson WH. Patient views on primary care services for epilepsy and areas where additional professional knowledge would be welcome. *Seizure* 1998;7:447-57.
13. Thapar AK, Stott NC, Richens A, Kerr M. Attitudes of GPs to the care of people with epilepsy. *Fam Pract* 1998;15:437-42.
14. Krishnaiah B, Alwar SP, Ranganathan LN. Knowledge, attitude, and practice of people toward epilepsy in a South Indian village. *J Neurosci Rural Pract* 2016;7:374-80.
15. Rambe AS, Sjahrir H. Awareness, attitudes and understanding towards epilepsy among school teachers in Medan, Indonesia. *Neurol J Southeast Asia* 2002;7:77-80.
16. Obeid T, Abulaban A, Al-Ghatani F, Al-Malki AR, Al-Ghamdi A. Possession by 'jinn' as a cause of epilepsy (Saraa): A study from Saudi Arabia. *Seizure* 2012;21:245-9.
17. Fong CY, Hung A. Public awareness, attitude, and understanding of epilepsy in Hong Kong Special Administrative Region, China. *Epilepsia* 2002;43:311-6.
18. Bhikkhu T. What the Buddha Taught us about Race. Thailand: Tricycle; 2016.
19. van Donselaar CA, Stroink H, Arts WF, Dutch Study Group of Epilepsy in Childhood. How confident are we of the diagnosis of epilepsy? *Epilepsia* 2006;47 Suppl 1:9-13.
20. Gomes MD. Doctors' perspectives and practices regarding epilepsy. *Arq Neuropsiquiatr* 2000;58:221-6.
21. Société Française de Neurologie. Management of 1st epileptic seizure among adults. Paris, France: Société Française de Neurologie; 2014.
22. NSB. Bhutan Poverty Analysis. Thimphu, Bhutan: National Statistics Bureau; 2013.
23. Calişir N, Bora I, Irgil E, Boz M. Prevalence of epilepsy in bursa city center, an urban area of Turkey. *Epilepsia* 2006;47:1691-9.