National Prevalence of Epilepsy Survey: Summary

Epilepsy affects 50 million people worldwide and 80% of them live in the developing world. The prevalence of epilepsy is higher in developing countries compared to developed countries. A recent review of epilepsy in 23 Asian countries reported that the lifetime prevalence of epilepsy ranged from 1.5 to 14.0 per 1000 population with variation between countries. In Bangladesh, there are no existing data on epilepsy from a nationally representative survey. Therefore, a national-level household survey was conducted in 2017 to estimate the prevalence and type of epilepsy, proportion of active epilepsy, treatment gap and treatment pattern, commonly used anti-epileptic drugs, and perceptions of epilepsy. Findings of this survey will help policy makers in planning programs for the management of epilepsy in Bangladesh.

The population-based cross-sectional survey was conducted among 10,080 subjects of all ages in with an equal number (5040) from urban and rural areas. Samples of this survey were drawn from 72 primary sampling units (PSUs) that represent the total geographical area of the country based on probability proportional to size of the geographical area. Respondents were selected by using multi-stage geographically clustered sampling. Data were collected by face-to-face interview using the pre-tested questionnaire in two stages. Prior written consent (or thumb impression) of each respondent was obtained using consent or assent forms (from parents whose children were less than 12 years) as appropriate. The field team members (field organizers and enumerators and research physicians) were trained before being deployed to the field. The quality of data was ensured by continuous monitoring of the field activities at different levels using prescribed quality check forms, phone calls and telemedicine consultations. Collected data were entered in MS Excel file and analyzed by SPSS version 20.0. Ethical approval was obtained from Bangladesh Medical Research Council.

The overall response rate of this survey was 97.6% (9,839/10,080). Of the total respondents (9,839), 50.7% (4,990) were women. The median (interquartile range) age of the respondents was 29 (15 – 45) years. We observed that there were far fewer female participants under 18 years of age in the survey (628) compared to males (2240). The overall country prevalence of epilepsy per 1000 was 8.6 (95% CI 6.8-10.5). In urban areas the prevalence was 7.9 per 1000 (95% CI 5.4-10.4) and in rural areas, 9.3 per 1000 (95% CI 6.6-12.0). The prevalence in males was 9.7 per 1000 (95%CI 6.9-12.5) compared to 7.6 per 1000 in females (95% CI 5.2-10.0). Further analysis showed that the prevalence of epilepsy per

1000 was higher in children aged 1m to 17 years (11.5 per 1000) compared to adults aged ≥18 years (7.5 per 1000). The majority of respondents in the survey (96.0%) believed that epilepsy is a medical condition and that it can be cured by medicine i.e. anti-epileptic drugs.

Among all confirmed epilepsy cases, almost half (49.4%) were primary generalized tonic clonic seizures (GTCS) followed by partial epilepsy (30.6%). The type of epilepsy was almost similar in both adults and children. The majority of the cases (66.0%; 56 of 85) were active epilepsy. The survey revealed a very high treatment gap among those with active epilepsy; 94.6% were not receiving appropriate anti-epileptic treatment.

The observed prevalence and types of epilepsy of the present survey were found to be similar to many of the population-based studies conducted in developed and developing countries. However, the proportion of active epilepsy and the treatment gap are considerably higher in Bangladesh. Therefore, targeted awareness on epilepsy is required to initiate and maintain optimum anti-epileptic drug treatment. Provision of adequate treatment capacity at all health facility levels, particularly in the primary health care setting, can reduce the treatment gap and overall burden of epilepsy in the country.
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