



## Brief Communication

## Outcome of a school-based health education program for epilepsy awareness among schoolchildren

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## ABSTRACT

**Background:** A diagnosis of epilepsy has a major effect on children; especially among schoolchildren. Studies have shown that a significant proportion of teachers and students have negative attitude and misunderstanding towards epilepsy making it difficult for a child with epilepsy. At the same time, there is a dearth of literature regarding interventions to bring about a change in the attitudes of children.

**Methodology:** The aim of the present study was to study the outcome of a school-based health education program for epilepsy awareness among schoolchildren. The objectives were to assess the level of knowledge, attitude, and practices about epilepsy and relationship among these variables. A total of 70 children, from 8th–10th grades were selected randomly for the study. For the study purpose, knowledge, attitude, and practices of epilepsy instrument were developed and face validated by experts.

**Results:** Results show that the mean, median, and mode age of the respondents in the study were 14.55 ( $\pm 1.33$ ), 15, and 14 years, respectively. The gender distribution of the respondents was 54.9% boys and 45.1% girls. With regard to knowledge, attitude, and practices in epilepsy, knowledge strongly and positively correlated with attitude ( $p = 0.001$ ,  $r = .423$ ) and practice domains ( $p = 0.001$ ,  $r = .486$ ). Postattitude and practice were positively correlated, which shows that positive attitude brings positive practice. Hence, it is concluded that a training program brings desirable change in the knowledge, attitude, and practice domains among children.

**Conclusion:** Health education programs for schoolchildren are very important to bring changes in their attitude, behavior, and practices.

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## 1. Introduction

Epilepsy is one of the most common neurological disorders, affecting approximately 70 million people worldwide. It is a major public health problem, not only because of its health implications but also for its social, cultural, psychological, and economic effects [1–4]. Although knowledge, attitude, and beliefs towards epilepsy have improved in most countries, there is still misperception [5]. The fear and misunderstanding of epilepsy may lead to social stigma, resulting in social discrimination, particularly in teenagers [6]. Studies have shown that a significant proportion of teachers and students have negative attitudes and misunderstanding towards epilepsy. At the same time, there is a dearth of literature regarding interventions to bring about a change in the attitudes of children and teachers. With sufficient training and knowledge, stigma towards children with epilepsy can be changed.

Educating schoolchildren during the initial school years can be highly effective in looking at their classmate suffering from epilepsy with empathy. Studies have shown that providing accurate information to children about epilepsy at an early age may result in decreased stigma and secrecy and more positive attitudes towards epilepsy. It is also important to have medically accurate health education programs for parents, school teachers, and students to dispel myths and misconceptions about epilepsy.

The hypothesis of the present study was that a health education program on epilepsy would enhance the knowledge, attitude, and practices about epilepsy. The aim was to study the outcome of a school-based health education program for epilepsy awareness among schoolchildren. The objectives were to assess the level of knowledge, attitude, and practices about epilepsy and relationship among these variables.

## 2. Materials and methods

This study was carried out between September 2014 and June 2015 among 70 school students. The nearest government school was

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identified, and permission to conduct the intervention study was obtained by the principal of the school and Department of Education, Government of Karnataka. The study was reviewed and approved by the institute's ethics committee. Written informed consent from children and from their parents was obtained to participate in the study.

### 2.1. Assessment

An assessment of the commonly recommended school textbooks was undertaken to identify the epilepsy-related content within them. None of the textbooks had any content to educate the teachers and schoolchildren about epilepsy. Within the school, students from 8th–10th grades were eligible for participation. From each grade, 25 students were selected randomly. Five students dropped out from the study. Hence, the final analysis included 70 students.

### 2.2. Tools

Based on the review of literature and discussions with experienced clinicians on epilepsy, a tool to assess knowledge, attitude, and practices [KAP] was formulated. The developed instrument was given to subject experts for face validity. Based on the suggestions, the tool was modified and used in the study. The investigators finalized the tool with a case vignette of a child having a seizure to help the students understand a seizure better, along with the KAP tool. The finalized tool had 8 items each in knowledge and attitude domains. The practice domain had 9 items. Right answers were given 1 mark, and wrong answers were given 0. The domain scores were calculated by summing up right answers from each domain. The data were collected using an interview method by a third party, who was not related to the study and was trained for the study purpose.

### 2.3. Intervention package

An intervention package was developed by the investigators based on the results of the baseline assessment, literature, and suggestions of health professionals. The intervention package had contents on epilepsy awareness for the students with respect to their existing knowledge, attitude, and myths and misconceptions of epilepsy; first aid in epilepsy; belief and practices about epilepsy; and role of students in school. As a part of the intervention package, the following information, education, and communication (IEC) materials were developed by the investigators to impart the health education program.

#### 2.3.1. Knowledge domain

Health education materials on psycho-education about epilepsy, nature, causes, symptoms, treatment options, and prognosis were developed by validating the material by a team of faculty from a multidisciplinary team comprised of neurologists, child psychiatrists, social workers, psychologists, and nursing and health educators. Posters and brochures on myths and misconceptions and awareness about epilepsy were prepared by the investigators which were used during the session and also kept on display for a few days. Apart from this, role-plays, focus group discussions, and group activities were also used as a medium to deliver the intervention.

#### 2.3.2. Attitude domain

To increase favorable attitudes among students, sessions were included on dealing with empathy towards a student having epilepsy; in addition, myths and misconceptions were clarified. Students were shown posters which explained how they can reach out to their peer by being supportive in times of absenteeism, sharing notes, group studying, and reminding to take medications. Also, the researcher discussed how students can develop a more favorable attitude towards a student with epilepsy and their right for work and education.

#### 2.3.3. Practice domain

To educate the students on providing accurate first aid in epilepsy as a part of the intervention strategy, a twelve-minute video on first aid in epilepsy was developed by the investigators. The script to prepare the video was approved by a team of neurologists from the institute. There was also discussion on the need to follow the right practices when they see a person having a seizure, including proper first aid, the need for appropriate medical treatment, and the importance of providing need-based information to the family. The study also worked towards incorporating epilepsy education as a part of the syllabus for the students by the teachers.

The study was conducted in three batches; each batch consisted of 18–25 children. The training was spaced out over a period of three days. The training sessions were observed and notes made on the training process. Each session was immediately evaluated by taking feedback from the students about the perceived quality, content, and relevance of the content; duration of health education sessions; and suggestions for improvements. Postassessment was carried out a week after the intervention. The obtained data were analyzed using IBM SPSS version 20.

## 3. Results

The ages of the sample were normally distributed. The mean, median, and mode age of the respondents in the study were 14.55 ( $\pm 1.33$ ), 15, and 14 years, respectively. The gender distribution of the respondents shows that 54.9% were boys and 45.1% were girls.

Table 1 details the students' knowledge about epilepsy. Results show that before the intervention, knowledge was not adequate for in most of the items. For the question as to whether epilepsy can be caused by touching the person with epilepsy, only 17% had adequate knowledge. After the intervention, most of the respondents understood the cause for epilepsy. Table 2 describes the students' attitudes about epilepsy. Results show that, before the intervention, most of the respondents had negative attitudes, whereas, after the intervention for most of the items, respondents' attitudes changed. For example, with regard to the question as to whether it is difficult for persons with epilepsy to study, about 11% had adequate knowledge. After the intervention, the majority (93%) of the respondents changed their attitude. Table 3 describes the students' practices about epilepsy. Results show that, before the intervention, most of the respondents had wrong practices, whereas, after the intervention for in most of the items, respondents had positive practices. For example, regarding the question as to whether sharp objects should be removed from near a person having a seizure, about 19% had adequate knowledge. After the intervention, the majority (77%) of the respondents understood the right practice.

Table 4 presents the participants knowledge, attitudes, and practices about epilepsy before and after the training program. To test the difference between pre- and posttraining paired sample 't' test was done. In three domains, there was a statistically significant difference between pre- and posttraining mean scores ( $p = 0.000$ ). In the knowledge domain, the pre-intervention mean score was  $3.47 \pm 1.13$ ; in the postassessment, it increased to  $7.60 \pm 0.52$ . In the attitude domain, the pre-intervention mean score was  $0.64 \pm 0.94$ , which increased to  $7.59 \pm 0.55$ ; in the practice domain, the pre-intervention mean score was  $1.36 \pm 0.96$ , and this increased to  $7.67 \pm 0.50$  in the postassessment.

Table 5 shows the correlation among various domains. Pre-intervention knowledge, attitude, and practice domains were significantly related. Knowledge and attitude were positively correlated ( $p = 0.01$ ,  $r = 0.641$ ), which indicates that the greater the knowledge, the more favorable the attitude towards persons with epilepsy. Knowledge and attitude were negatively correlated with the practice domain.

Knowledge was strongly and positively correlated with the attitude ( $p = 0.001$ ,  $r = .423$ ) and practice domains ( $p = 0.001$ ,  $r = .486$ ). This strongly suggests that knowledge leads to positive attitudes and good practices among children. Likewise, post-intervention attitudes and

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