

Assessing primary school teachers' awareness and attitudes toward epilepsy: A descriptive study

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Abstract

Background: Epilepsy is a chronic neurological condition characterized by recurrent, unprovoked seizures caused by abnormal, excessive, or synchronized brain activity. It is most commonly diagnosed during the first decade of life, a crucial period for children's social and educational growth. Children with epilepsy often encounter difficulties in school, and teachers, who may lack specialized training, can feel uncertain and frustrated about managing seizures effectively.

Objectives: This study aimed to assess primary school teachers' awareness of epilepsy and attitudes toward children with epilepsy.

Method: A descriptive cross-sectional study was conducted among primary school teachers in El-Obied City. A total of 80 participants were selected using a non-probability convenience sampling technique. Data were collected through a self-administered questionnaire and analyzed using the Statistical Package for the Social Sciences (SPSS).

Results: Of the 80 participants, 70 (87.5%) had heard of or read about epilepsy, while 10 (12.5%) had not. Among those who were familiar with epilepsy, most had learned about it through various news media. Furthermore, 62 participants (77.5%) indicated that there were no children with epilepsy enrolled in their schools. Only 10 participants (12.5%) believed epilepsy to be contagious. On a positive note, 59 participants (73.8%) opposed the idea of forming a separate class exclusively for children with epilepsy. Furthermore, 50 participants (62.5%) demonstrated a good understanding of the first aid measures needed for a child experiencing a seizure.

Conclusion: The study revealed that while most teachers in El-Obied City are aware of epilepsy, misconceptions about its causes and treatment persist. Despite this, teachers generally show positive attitudes toward inclusion and possess basic first-aid knowledge for seizures. However, many feel unprepared to manage seizures in the classroom. These findings highlight the need for educational programs to improve teachers' understanding of epilepsy and enhance their ability to support affected students, ensuring a more inclusive and supportive learning environment.

Keywords: Primary School Teachers; Awareness; Attitudes; Epilepsy

1. Introduction

Epilepsy is a chronic neurological disorder characterized by recurrent, unprovoked seizures due to abnormal neuronal activity in the brain. It is one of the most common neurological conditions worldwide, affecting approximately 50 million

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people [1]. Children diagnosed with epilepsy face difficulties with learning and social interactions, compared to those without epilepsy or any other chronic medical condition. Some of these difficulties are related to cognitive, motor, behavioral, and academic activities. For children with epilepsy, the school environment can present unique challenges. In addition to managing their condition, these children often experience social and emotional difficulties, as well as disruptions in their academic performance [2].

Teachers play a vital role in supporting children with epilepsy. However, many teachers lack proper training and knowledge about the condition, which makes it difficult for them to manage seizures effectively and provide adequate educational support. This knowledge gap can lead to the mismanagement of seizures, increased anxiety for both teachers and students and potential stigmatization [3].

Despite growing awareness of epilepsy, studies have shown that many educators still have limited understanding of how to recognize seizures, administer first aid, or address the broader impacts of epilepsy on learning and behavior. Misconceptions, such as the belief that epilepsy is contagious or that children with epilepsy should be segregated into special education settings, remain prevalent. These misconceptions can hinder the inclusion of children with epilepsy in regular classrooms and negatively affect their educational and social experiences [4].

Teachers play a crucial role in helping students with epilepsy develop socially, academically, and emotionally. When teachers are trained to respond effectively to seizures, they enhance school safety and positively influence how other students and school staff react to the condition [5].

This study aims to assess primary school teachers' awareness of epilepsy, their attitudes toward children with epilepsy, and their preparedness to handle seizures in the classroom. By understanding teachers' perceptions and knowledge gaps, we can inform the development of targeted educational programs that enhance the support and care provided to children with epilepsy in schools.

2. Methodology

This was a descriptive, cross-sectional, community- and school-based study. The study was conducted in El-Obeid City, the capital of North Kordofan State, Sudan. El-Obeid City is home to 135 public primary and 107 private schools, distributed across various city areas. The study population consisted of primary school teachers in El Obeid city. Primary school teachers working in public and private schools in El Obeid city were included in the study. Teachers from nursery, intermediate, or secondary schools and retired primary school teachers were excluded from the study.

Data was collected through a self-administered questionnaire distributed to school and community teachers. The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS), and the results were presented in tables and figures.

2.1. Study Variables

- Dependent Variable: Primary school teachers' awareness about epilepsy and their attitudes toward children with epilepsy in El Obeid City.
- Independent Variables: Teachers' level of education, their sources of information about epilepsy, and their background knowledge of the condition and children affected by it.
- Background Variables: Age, gender, level of education, and school category.

2.2. Ethical Consideration

The Ethics Committee at the College of Medicine, University of Kordofan, approved the study. After a thorough explanation of the study's objectives, the Ministry of Primary Education in El-Obeid, headteachers, and participating educators gave written consent. Throughout the process, strict measures were implemented to ensure data confidentiality.

3. Results

The data were analyzed using descriptive statistics to assess the awareness and attitudes of primary school teachers toward epilepsy and children with epilepsy in El-Obeid City. Out of 80 participants, the majority were female (73.8%) and aged over 40 years (45%). Teachers aged 25-30 years made up 31.3%, and 23.8% were between 30-40 years old. Regarding educational qualifications, 78.8% of teachers held a bachelor's degree, while 21.3% had postgraduate

qualifications. The majority (65%) taught in private schools, with 35% teaching in public schools, due to the temporary closure of public schools during data collection [Table 1].

When asked about prior knowledge of epilepsy, 87.5% of teachers reported having heard or read about the condition, mostly through various media (33.8%), while only 12.5% learned about it from a doctor. Regarding personal experience, 22.5% had a family member or acquaintance with epilepsy, but 77.5% had no epileptic children in their schools. Most teachers (90%) reported not having an epileptic child in their class. In understanding the causes of epilepsy, 37.5% of teachers believed it was due to various brain disorders, while 22.5% attributed it to genetic defects, and 8.8% thought it was caused by brain tumors. However, 27.5% were unsure about the cause. A positive finding was that 87.5% of the teachers rejected the idea that epilepsy is contagious, although 12.5% still believed it to be so. A significant misconception was that 67.5% of teachers thought epilepsy was a psychiatric disorder. Regarding whether epilepsy is a chronic, incurable condition, 67.5% answered "no," with 32.5% perceiving it as both chronic and curable. When asked about the academic performance of epileptic students, 53.8% believed they had moderate academic achievement, while 26.3% thought their performance was low [Table 2].

Concerning anxiety about having epileptic children in the class, 67.5% of teachers expressed no fear, citing the importance of social inclusion for improving quality of life and reducing stigma. The remaining 32.5% expressed concerns about handling seizures, fear of aggressive behavior, or doubts about the children's learning abilities. On managing epileptic children in school, 53.8% of teachers preferred that a child receive treatment before attending school, while 46.3% thought they should only attend after being fully cured. Regarding segregating epileptic children into special schools or classes, 73.8% opposed the idea, while 26.3% supported it [Table 3].

Regarding interactions with epileptic children, 73.8% of teachers had no problem allowing their children to interact with epileptic peers, while 26.3% did. In terms of first aid, 62.5% of teachers reported removing harmful objects during a seizure, but 28.7% did nothing, and 2.5% tried to stop the convulsions physically. Other responses included calling a doctor (1.3%) or the child's parents (0.5%), and some teachers mentioned placing a spoon in the child's mouth or spraying water to stop convulsions [Table 4].

Table 1 Demographic Characteristics of the Study Participants

Characteristic	Frequency (%)
Gender	
Female	59 (73.8%)
Male	21 (26.3%)
Age Group	
25-30 years	25 (31.3%)
30-40 years	19 (23.8%)
Over 40 years	36 (45%)
Educational Qualification	
Bachelor's degree	63 (78.8%)
Postgraduate degree	17 (21.3%)
School Type	
Private schools	52 (65%)
Public schools	28 (35%)

Table 2 Knowledge of Epilepsy

Question	Yes (%)	No (%)
Heard or read about epilepsy	70 (87.5%)	10 (12.5%)
Epilepsy is contagious	10 (12.5%)	70 (87.5%)
Have a family member with epilepsy	18 (22.5%)	62 (77.5%)
Have an epileptic child in school	18 (22.5%)	62 (77.5%)
Epilepsy is a psychiatric disorder	54 (67.5%)	26 (32.5%)
Epilepsy is chronic and incurable	32 (40%)	48 (60%)
Epilepsy is caused by multiple brain disorders	30 (37.5%)	50 (62.5%)

Table 3 Teachers' Attitudes and Behavior Toward Epileptic Children

Question	Yes (%)	No (%)
Fear or anxiety about having an epileptic child in class	26 (32.5%)	54 (67.5%)
Would allow their children to interact with epileptic children	21 (26.3%)	59 (73.8%)
Prefer that a child with epilepsy receive treatment before attending school	43 (53.8%)	37 (46.3%)
Support segregating epileptic children into special classes or schools	21 (26.3%)	59 (73.8%)

Table 4 First Aid and Seizure Management Knowledge

First Aid Action	Frequency (%)
Remove harmful objects during a seizure	50 (62.5%)
Do nothing	23 (28.7%)
Attempt to stop convulsions physically	2 (2.5%)
Call a doctor	1 (1.3%)
Call the child's parents	0 (0.5%)
Place the spoon in the child's mouth	0 (1.3%)
Spray water to stop convulsions	0 (0.5%)

4. Discussion

The results of this study reveal both strengths and weaknesses in primary school teachers' awareness and attitudes toward epilepsy in El-Obeid City, Sudan. While a significant proportion of teachers reported some awareness of epilepsy, misconceptions and insufficient understanding of the condition remain prevalent. These issues could have a considerable impact on the integration and care of children with epilepsy in the educational setting.

4.1. Awareness of Epilepsy

In this study, 87.5% of teachers had heard or read about epilepsy, with the majority receiving information from media sources (33.8%). However, only 12.5% obtained their knowledge from healthcare professionals. This finding suggests that, while there is general awareness of epilepsy, there is a significant gap in knowledge from medical experts, which may lead to incomplete or inaccurate understandings of the condition. Previous studies have shown that knowledge of epilepsy is often limited in communities and educational settings, with information typically coming from informal sources such as television, the internet, or hearsay, rather than structured education from healthcare providers [6,7].

Moreover, 27.5% of teachers could not identify the cause of epilepsy, and a substantial portion (37.5%) incorrectly associated it with psychiatric disorders. This reflects a common misconception, as epilepsy is a neurological disorder and not a mental illness. Such misunderstandings may contribute to the stigma and social exclusion of children with epilepsy, as evidenced in other studies that highlight the negative impact of incorrect perceptions on the educational and social integration of affected children [8,3]. Teachers' confusion about the causes of epilepsy underscores the need for better education and professional development focused on dispelling myths about the disease.

4.2. Teachers' Attitudes Toward Epileptic Children

The attitudes of teachers toward children with epilepsy are critical to their social inclusion and educational success. In this study, 67.5% of teachers expressed no anxiety about having children with epilepsy in their classrooms, while 32.5% reported some degree of concern. Concerns mainly centered around managing seizures, potential disruptive behavior, and student academic performance. This aligns with findings from other studies, which suggest that educators often feel unprepared and anxious when confronted with students who have epilepsy or other neurological conditions. Training in seizure first aid and in managing emotional and behavioral challenges could help alleviate these concerns and improve teachers' confidence in handling epileptic students [9,10].

Furthermore, while 53.8% of teachers preferred that children with epilepsy receive treatment before attending school, this viewpoint may reflect a lack of understanding about the chronic nature of the condition and the episodic nature of seizures. Epilepsy, as a chronic condition, does not preclude children from receiving an education, especially if their seizures are well-controlled. Many children with epilepsy can lead normal, productive lives when provided with appropriate medical and educational support. Teachers' attitudes toward treatment and inclusion reflect the need for greater awareness that children with epilepsy can be fully integrated into mainstream education without the need for prolonged medical leave unless medically indicated [11].

4.3. Inclusion and Segregation of Epileptic Children

In this study, 73.8% of teachers opposed the idea of creating separate schools or classes for children with epilepsy. This finding supports the trend toward inclusive education, which emphasizes the importance of integrating children with epilepsy into regular classrooms, where they can benefit from social interaction and participate in academic activities alongside their peers. Inclusion has been shown to improve the quality of life of children with epilepsy, reduce stigma, and enhance their self-esteem and academic performance. The resistance to inclusion, however, expressed by 26.3% of teachers, may be due to perceived challenges such as managing seizures or fears that epileptic children might disrupt the learning environment. These concerns can be addressed through training programs that emphasize the advantages of inclusion and provide practical strategies for supporting children with epilepsy in the classroom [12].

4.4. First Aid and Seizure Management

Regarding seizure first aid, the study found that 62.5% of teachers knew to remove harmful objects during a convulsion, but 28.7% did not act. Only a small proportion of teachers (2.5%) attempted to stop the convulsions by physically restraining the child, and others offered varied responses, such as calling a doctor or placing objects in the child's mouth, which could be harmful. These findings highlight a critical gap in teachers' knowledge and preparedness to handle seizures appropriately. Effective seizure management requires both an understanding of the basic first aid measures and the ability to remain calm during an episode. Research has shown that many teachers lack proper training in handling medical emergencies like seizures, which can lead to delays in providing appropriate care and increase the risk of injury [13].

There should be an increase in health education programs and awareness campaigns about epilepsy, which should be conducted in collaboration with the Ministry of Education. Furthermore, first aid training should be a mandatory requirement for teachers before obtaining their licenses, with periodic renewals to ensure they are up to date on the latest guidelines and procedures [14].

5. Conclusion

The study revealed that while most teachers in El-Obied City are aware of epilepsy, misconceptions about its causes and treatment persist. Despite this, teachers generally show positive attitudes toward inclusion and possess basic first-aid knowledge for seizures. However, many feel unprepared to manage seizures in the classroom. These findings highlight the need for educational programs to improve teachers' understanding of epilepsy and enhance their ability to support affected students, ensuring a more inclusive and supportive learning environment.

Recommendations

- **Teacher Training:** Educate teachers on epilepsy management and social inclusion.
- **Health Service Collaboration:** Partner with health professionals for relevant training.
- **Stakeholder Support:** Encourage collaboration between educators, health professionals, and parents.
- **School Accommodations:** Ensure policies for extra time, rest, and safety for epileptic students.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare no conflicts of interest.

Statement of ethical approval

Ethical approval was obtained

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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