

## Presentation of Saudi Teachers' Knowledge, Attitude and Practices Regarding First Aid of Epilepsy

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### Abstract:

**Background:** epilepsy is a common neurological disorder among school children. While school teachers are the most and available caregivers for these students. The researchers found it necessary to search and review the current knowledge, attitude and first aid toward epilepsy among school teachers in Saudi Arabia. **Method:** in this article, we review a state of art of over view about knowledge, attitude and first aid toward epilepsy among school teachers in Saudi Arabia. **Results:** this review confirmed a low to moderate knowledge, positive attitude and need for training about first aids. **Conclusion:** the researches emphasize the important role of school teachers in reducing epilepsy related physical, social, psychological and academic problems among students. Therefore, it is necessary to increase the teachers' level of knowledge, attitude and practices regarding epilepsy and its consequences.

**Key words:** knowledge, practice, attitude, first aid, epilepsy, Saudi teachers

## **Introduction:**

Epilepsy is a prevalent neurological disorder in schoolchildren age with high incidence (Al-Harbi& Alsaid., 2018).Globally, it affects over 50 million persons about 80% of them are from developing countries, and in Saudi Arabia its prevalence was estimated at 6.54/1000 of the population.Epilepsy is often linked erroneously to contamination and supernatural causes as evils and spirits, leading to social negative attitudes, false beliefs and discrimination against children and adults with epilepsy (Al-Hashemi et al., 2016; Obeid et al., 2012)..... Most Saudi people believe the cause of epilepsy is Jinn possession. Hence, many epileptic patients consult traditional healers and rely on complementary and alternative therapies. Epilepsy is surrounded by prejudice and social stigma whose effect on children exceeds the effect of epilepsy itself.Stigma leads to families preventing their children from attending school or sports and social activities. Furthermore, stigma causes 15% of teachers' refusal to admit students with epilepsy in classes.Stigmatization could be reduced by improving social awareness, attitude and knowledge regarding epilepsy (Shehata & Mahran., 2010).

Recent studies indicated that surveys levels of awareness toward epilepsy are comparable across Asian and developing nations, but vastly underperform knowledge and attitude levels in the Western and developed countries (Al-Hashemi et al., 2016).A latest Saudi study the ability of teachers to effectively provide first aid for an epileptic fit was estimated at 31%, indicative of a need for considerable improvement in training. In the same line, the study of Aleid et L., 2020 who found that teachers' knowledge about epilepsy was shown to be quite insufficient and their misconceptions were wide-ranging about nature and management of epilepsy, and their training is inadequate.

While epilepsy can negatively affect a child's health, behavior, and academic performance and undermine their mental health. Moreover, a seizure can occur in school, and teachers consequently will be the first health care providers. Teachers' knowledge of epilepsy and seizure first aid can have a powerful impact on a child's health, performance, and social skill development (Chong et al., 2016)

## **Review:**

Epilepsy is a non-communicable disease that affects approximately 65 million people worldwide (Alharthi et al., 2019). It also described as a group of neurological disorders characterized by epileptic seizures. It is the commonest chronic, recurrent neurological

childhood disease, and has become a major public health problem (Noebels et al., 2012, Zhao et al., 2017).

Very little is known about the exact mechanism of epilepsy, however, a little is understood regarding its cellular and network mechanisms. During a period of epilepsy, there is a decrease in the resistance to fire the excitatory neurons. This may be because of changes in ion channels or because of the inhibitory neurons failing to function correctly. This then results in development of seizures from a specific area of the brain, known as a “seizure focus” (Hammer et al., 2010).

Epilepsy can occur as the result of brain injury, brain tumor, infections of the brain, stroke, and birth defects, which occur through a process called epileptogenesis . However, how the brain shifts into the activity of a seizure with its excessive synchronization remains unclear. Both genetic and acquired causes such as serious brain trauma, tumors stroke, and complications resulting from previous infection, can be the cause of epilepsy, with interaction of these factors in many cases. The cause of epilepsy is unknown in about 60% of all cases (WHO; 2016).

Valid and reliable information is needed concerning the prevalence of epilepsy and its natural course and causes, to better develop the approach to epilepsy treatment, analyze the efficiency of therapeutic strategies and, more importantly, determine methods for the prevention of its development. Epidemiological studies can provide such information (Goldberg., 2013). Many studies have discussed epilepsy among school children. Febrile convulsions, history of head trauma, family history of epilepsy, antenatal/postnatal problems, premature birth serious maternal illness during pregnancy, a history of neonatal jaundice and poor family income are considered a risk factors and all had a statistically significant relation to the development of epilepsy (National Clinical Guideline Centre., 2012).

In 2017 Alsharif and others confirmed in his study that epilepsy is a common neurological disorder in this part of Saudi Arabia, its prevalence among school children (6–18 years) is 5.5%, which is higher in males than in females. It is associated with consanguinity and positive family history. Decision makers must take effective steps to limit the causes and risk factors of the problem. Adequate and proper prenatal care aimed at avoiding problems during pregnancy and perinatal measures could reduce complications that may result in epilepsy. Strengthening of the health systems to include information about the risk factors for Epilepsy in their outreach programs could reduce the prevalence of epilepsy in Turaif, Northern Saudi Arabia.

Various studies are conducted to assess the school teachers' knowledge, attitude and first aid regarding epilepsy. In this respect, Alamri et al., 2018 study concluded that School teachers' knowledge about epilepsy needs improvement. A focus on educational interventions about epilepsy are needed to develop a well-informed and tolerant community.

Moreover, study intended to assess elementary school teachers' knowledge, attitude and practice towards epilepsy in Taif city, Saudi Arabia. The results showed that (95%) of participants have heard of epilepsy and their source of knowledge was mostly public media (43%). (58.8%) believed that epilepsy is a result of multiple causes like head trauma, brain tumor and even spiritual illness. (15.5%) think that epilepsy can't be cured or controlled and (17.3%) think children with epilepsy can't practice their life normally. The majority of them (79%) will allow their children to play with an epileptic child but only (19%) will allow them to marry an epileptic patient in the future. If a child is having a seizure at school (40.3%) of the teachers chose to open their mouth forcefully to prevent tongue swallowing. Based on those results, they conclude that there is a gap in teachers' knowledge regarding epilepsy which necessitates the presence of education programs about dealing with epileptic children properly (Alharthi et al., 2019).

In addition Abulhamail et al., 2014 conducting a study concerning the primary school teachers in Jeddah knowledge and attitudes and identify areas in which further teacher training and education are required. The research results showed that Six hundred and twenty primary school teachers working in public (58%) or private (42%) schools were included with ages ranging between 21 and 59 years (mean 36). Most teachers (79%) were of Saudi Arabian nationality and 66% had a college or university degree. Their years of experience ranged from 1 to 35 (mean 13.5). Only 17% of the teachers felt very well informed about epilepsy. Teachers with higher education were more likely to have good knowledge ( $p = 0.009$ ). Teachers of Saudi nationality were also more likely to report good knowledge, independent of their educational level ( $p = 0.013$ ). Overall, teachers with good knowledge were less likely to have negative attitudes including minding to have an epileptic child in their class ( $p = 0.028$ ) or thinking that they should be placed in a special classroom ( $p = 0.029$ ). The study also concluded that Primary school teacher's knowledge about epilepsy needs improvements. Their attitudes correlated highly with their knowledge. Educational campaigns about epilepsy are needed to develop a well informed and tolerant community.

## Discussion:

Epilepsy is one of the most common pediatric neurological disorders with higher incidence during the school years. These years represent a critical period of the child's social, psychological, and physical development. The school period will significantly impact the child's quality of life and future adult roles. Children with epilepsy are at increased risk of educational underachievement, learning difficulties, mental health problems, social isolation, and poor self-esteem. Teacher's knowledge and attitudes toward epilepsy can have significant impact on these difficulties including student's performance, social skill development, and future employment. International studies have indicated that teachers often have insufficient knowledge, inadequate training, and misconceptions about epilepsy and its management. Despite the significant impact of teacher's role in the lives of these children, very little research has been conducted in Saudi Arabia to assess these issues (Abulhamail et al., 2014).

Based on this thorough literature and article review, the researchers found a low to moderate knowledge about epilepsy causes, pathophysiology, and risk factors. A positive attitude toward epileptic patients and poor knowledge about first aids during epileptic fits.

On the other hand, Aljehani., 2019 conduct a research to determine the knowledge of female teachers of elementary school in Makkah city. First aid about what should be done to a student who has an epileptic seizure. It was found that a highest proportion of teachers had correct answers.

Epilepsy is a chronic brain disease characterized by intermittent nervous system derangement due to sudden excessive cerebral neuron discharge that results in almost instantaneous sensation disruption and loss of consciousness. There is a clear lack of epilepsy information among the general population. A cross sectional study was done by Alharbi et al., 2021 to examine the knowledge, attitude and practice of schoolteachers towards epilepsy. The study showed that teachers' knowledge of epilepsy was promising, but still, there are gaps in knowledge and attitude towards first aid management. There is a need to address this issue with the training of schoolteachers with the cooperation of local health professionals.

Compared with other countries as Sudan, Elhassan et al., 2017 perform a research to assess knowledge, attitude, and practice of secondary school teachers toward epilepsy in Khartoum state, Sudan. They found a relatively low level of knowledge, especially about treatment and whether the disease is curable or not. Also there is misconception about the etiology and treatment by traditional means in spite of the high educational level. There is a

high level of negative attitude toward epileptic patients, especially in dealing with them as normal people who can live their lives, get married, and work in areas that suit them. There is a good level of positive practice toward epileptic seizures and their first aid measures, but there is also a high level of negative practice that can harm patients like tying them and putting a spoon in their mouths.

In order to assess Saudi male schoolteachers' knowledge of epilepsy and practice in Southern Saudi Arabia, a cross-sectional descriptive study was conducted by Alqahtani., 2015. He found that the schoolteachers were generally knowledgeable about epilepsy. This fact can be used to design a national program through which teachers can help to bring about a well-informed and tolerant community toward epileptics.

Most of researches emphasize the role of educational programs in increasing the level of knowledge and improving the attitudes and level of practices toward epileptic patient. Based on this issue, Murthy et al., 2020 concluded that inclusion of health education programs in the textbooks and health education schemes for teachers and school children are crucial ways to bring a change in their attitude, behavior, and practices toward epilepsy.

Furthermore, Alkhotani et al., 2019 founded that female school teachers in the Makkah region significantly lack adequate training and knowledge of seizure first aid. A health education policy targeting teachers may improve this.

### **Conclusion and recommendations:**

Public health campaigns should target schools to improve schoolteachers' knowledge about epilepsy. Research into improving teachers' attitudes and practices should be longitudinal and large-scale. Research into teachers' attitudes, knowledge and practices should incorporate qualitative methodology and thematic analysis approaches. Facts about epilepsy and other common medical disorders should be incorporated in university curriculum for education students and should also be an integral part of teacher training. Information campaigns about epilepsy should be innovative in dispensing accurate information through social media and state-sponsored press. Research on attitudes, beliefs, and knowledge should also focus on undergraduate university students in education to facilitate development of effective interventions to address expected gaps before their graduation.

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