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Knowledge, awareness and attitudes of pharmacy students toward epilepsy

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Abstract

Purpose: Pharmacy students represent a better educated group of society regarding the use of drugs and they are required to grasp the appropriate knowledge of drug use and have positive attitudes toward healthcare issues. Hence, the objective of this study was to determine the level of knowledge, awareness and attitude among pharmacy students at a public university in Pakistan.

Methods: A self-administered questionnaire, validated previously was distributed to the pharmacy students, University of Karachi, Pakistan. The completed questionnaire was collected on the same day. The students were required to respond a series of questions on their knowledge, awareness and attitudes toward epilepsy.

Results: The questionnaire was distributed to 216 students and the same number responded to the questionnaire. The majority of the respondents were of age group between 21-25 years (69.9%) and rest belonged to age groups 16-20 (21.8%) or 26-30 years (8.3%). The majority of the respondents were female (63%). About 69% students claimed to have knowledge of the cause of epilepsy, 57.9% respondents believed in the curability of epilepsy however 47.2% were unaware of the epilepsy treatment by antiepileptic drugs. Majority, 89.8% of respondents were familiar with the terminology of epilepsy, 10.4% students had attended lecture on epilepsy, while 54.2% had seen the epileptic attack.

Conclusion: In this study, majority of the students had knowledge of the disease however, majority were deficient in knowledge on the treatment of epilepsy. Hence, there is a need to improve certain aspects of knowledge of epilepsy among pharmacy students.

Keywords: *Epilepsy, awareness, attitude, antiepileptic drugs.*

Introduction

Pharmacy students constitute a better educated group of society regarding the use of drugs and they are required to grasp the appropriate knowledge of drug use and have positive attitudes toward healthcare issues. Appropriate and correct knowledge and awareness among the general population regarding epilepsy fluctuate widely among different countries. However, in developed countries, public attitude towards epilepsy has greatly improved over the years resulting in more favorable social environment (Mirnics et al. 2001; Jacoby 2002). In developing countries like Pakistan cultural beliefs, superstitions and lack of information about epilepsy exist which leads to various social and health problems.

Epilepsy is one of the most common neurological illnesses worldwide (Bernard et al 2003). It is as common as 1% in the general Pakistani population, with the majority of epileptics being under 19 years of age. The-specific prevalence rates are 14.8 per 1000 in rural and 7.4 per 1000 in urban areas (Aziz et al 1994). A study carried out in Pakistan showed that epileptic patients have considerable problems in getting education, performing daily tasks and getting married (Aziz et al 1997). According to meta-analysis, only 27.5% of urban and 1.9% of rural Pakistani epileptic patients receive antiepileptic drugs (AEDs) (Khatri et al 2003). This scenario may largely stem from a lack of knowledge about the manifestations of and available treatments for epilepsy (Bernard et al 2003).

The high prevalence of negative attitudes towards epilepsy has been highlighted by several recent studies, carried out in diverse communities including Ethiopia, Hong Kong and the United States (Alem et al 1999; Fong & Hung 2002; Kobao & Price 2003). However, a higher level of education correlates positively with awareness, knowledge and attitude concerning epilepsy. Community-based studies have reported that better-educated individuals offer more favorable opinions and display positive attitude (Mirnics et al. 2001; Chung 1995; Hills & Mackenzie 2002; Jensen & Dam 1992). Pharmacy students represent a better-educated section of society regarding drugs and have the potential to create awareness, improve concepts and influence attitudes towards the disease. Thus, it is important that they have the appropriate and

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updated knowledge and appropriate attitude towards epilepsy and antiepileptic drugs.

University of Karachi (UoK) is a public university, situated at the coastal city of Pakistan, which promotes the health issues through its affiliated medical colleges and faculty of pharmacy. The faculty of pharmacy in university always promotes health issues awareness and knowledge among the students as well as in society. Thus, the current study was conducted in the Faculty of Pharmacy of UoK with the aim to assess awareness and knowledge among pharmacy students and their attitude towards epilepsy.

Materials and Methods

This self-administered, questionnaire based study was carried out in pharmacy students of UoK, a public university located in the state of Sindh, under ministry of higher education, Pakistan. The questionnaire was written in the English language, which is the medium of instruction in public universities in Pakistan. The questionnaire was pre-tested on 20 students, a likely similar population to the study participants. Changes deemed necessary were incorporated into the questionnaire following pre-testing. The content of the questionnaire used in this study is presented in Table I.

The questionnaire was personally distributed among the students in the Faculty; sufficient time was given to respond to the questionnaire and was collected for analysis. The questionnaire was based on thorough search of relevant literature and discussions with experienced Faculty members. The most frequently identified questions on knowledge, awareness and attitudes, cited in previous studies were included in the questionnaire (Lai et al 1990; Mielke et al 1997; Bannon et al 1992; Rwiza et al 1993; Kankirawatana 1999). Statistical package, SPSS Version 13.0 was used for descriptive statistical analysis.

Results

Two hundred and sixteen students accepted to be the respondent of this study. All of the participants responded to the questionnaire completely. The demographics characteristics of the study population are given in Table II. The age of the students were grouped as 16-20, 21-25 and 26-30 years. Among the respondents, the majority of the respondents were undergraduate pharmacy students (95.4%) and the rest were postgraduate students (4.6%). About 18.5% of respondents were first year pharmacy students, while the second, third and forth year students constituted 13.9%, 20.8% and % 42.1 of respondents, respectively. The ratio between female to male students was 1.7:1. The responses to the questions were for knowledge, awareness and attitudes towards epilepsy are given below.

Knowledge

The responses from students regarding knowledge of epilepsy are presented in Figure 1. Majority of the students (68.5%) claimed to have knowledge about the cause of epilepsy. Even a higher percentage of respondents (79.2%) viewed epilepsy a disease not caused by evil spirits. About 70% of participants believed that epilepsy was acquired through inheritance. Sixty two percent respondents thought that epileptic patients could die from epilepsy; however 57.9% of the respondents thought that epilepsy is a curable disease. About 33% students said they knew the first-aid seizure management, however only 18.5% students said they knew the antiepileptic drugs available in Pakistan.

Awareness

The responses on awareness and previous experienced of epilepsy are given in Figure 2. Most of the respondents were aware of epilepsy. The majority of participants (89.8%) said they had either heard or read about epilepsy and 33.8% students said they had epileptic patient in their family. Only 10.6% of the participants had attended lecture on epilepsy. About 54% of study population had seen an epileptic seizure.

Table 1: Content of questionnaire for knowledge, awareness and attitude towards epilepsy

1. Gender: [ ] male [ ] female
2. Age: [ ] 16-20 [ ] 21-25 [ ] 26-30
3. Level of education: [ ] undergraduate [ ] postgraduate
4. Year of undergraduate study: [ ] 1st year [ ] 2nd year [ ] 3rd year [ ] 4th year
5. Do you the cause of epilepsy? [ ] yes [ ] no [ ] don't know
6. Do you think epilepsy is contagious? [ ] yes [ ] no [ ] don't know
7. Do you think is hereditary? [ ] yes [ ] no [ ] don't know
8. Do you think epilepsy is a form mental illness? [ ] yes [ ] no [ ] don't know
9. Do you think epilepsy is caused by evil spirits? [ ] yes [ ] no [ ] don't know
10. Do you think people can die from seizures? [ ] yes [ ] no [ ] don't know
11. Do you think epilepsy can be cured? [ ] yes [ ] no [ ] don't know
12. Do you know how to perform first-aid epilepsy? [ ] yes [ ] no [ ] don't know
13. Have you heard or read about epilepsy? [ ] yes [ ] no
14. Have you ever attended a lecture or seminar on epilepsy? [ ] yes [ ] no
15. Anyone in your family that you know has epilepsy? [ ] yes [ ] no
16. Have you ever seen anyone having epileptic attack [ ] yes [ ] no
17. Have you ever done first-aid seizure management? [ ] yes [ ] no
18. Do you think epileptics can receive education? [ ] yes [ ] no
19. Do you think epileptics can perform daily activities? [ ] yes [ ] no
20. Do you think epileptics should not participate in sports? [ ] yes [ ] no
21. Do you think epileptics should be isolated from normal population? [ ] yes [ ] no
22. Do you think AEDs should be dispensed by pharmacist? [ ] yes [ ] no

Table 2: Demographic characteristics of the study population (n=216)

	n	%
Gender		
Male	80	37
Female	136	63
Age		
16-20	47	21.8
21-25	151	69.9
26-30	18	8.3
Level of education		
Undergraduates	206	95.4
Postgraduates	10	4.6

Attitude

Figures 3 and 4 summarize various attitudes among the students. Most of the participants had positive attitude towards epilepsy. The majority of the students (87%) thought epileptic patients should not be isolated from the normal population; however 39.4% believed the epilepsy patient should not participate in sports. Similarly most of the students (87.5%) said epileptic patients could receive academic education and perform daily activities (85.6%). About 70.4% responded had agreed on dispensing and consultation of AEDs by a pharmacist.

Discussion

This study was carried out to assess knowledge, awareness and attitude towards epilepsy especially among undergraduate pharmacy students. The respondents in this study were from the faculty of pharmacy, UoK. More females than males participated in our study, which is attributed to greater number of females than males in most of the Pakistani teaching institutes. This university-based study shows that knowledge and awareness of epilepsy among pharmacy students is relatively higher to those reported among the general population in community-based studies (Mirnics et al 2001; Chung et al 1995; Hills & Mackenzie 2002; Jensen & Dam 1992). Similarly the knowledge and awareness of epilepsy among pharmacy students is better than university students in other countries (Rahman 2005; Young et al 200), which is attributable to a number of reasons. Some studies were carried out using students from disciplines and not confined only to the pharmacy student (Rahman 2005). The students from the other non medical or non pharmaceutical disciplines were the cause of a shift towards the lack of disease knowledge. Other reason may be the different objectives and emphasis of the pharmacy curriculum, teaching of pharmacology at what year of studentship if the survey were conducted in the pharmacy students only.

Studies showed that there is little formal education on epilepsy available in school setting (Bannon et al 1992; Austin et al 2002). Fifty two percent of adolescents attending high schools had read or heard about epilepsy, only 5% had attended a presentation or lecture on epilepsy (Austin et al 2002). Similarly another study on school teachers showed that only 3% of them had attended courses on epilepsy (Bannon et al 1992). This suggests that inadequate formal education on epilepsy might be one of the reasons of insufficient knowledge and awareness about epilepsy. In Pakistan, there is no such program for general population or at pre-university level for information on disease.

In the current study, majority of the students (68.5%) said they knew the cause of epilepsy. This figure is relatively higher compared to study done in Malaysian university where the surveyed students were not confined only to discipline of pharmacy. In the Malaysia study, only 30% of the respondents knew the cause of epilepsy. However, the current findings were in line with other studies carried out in general population (Mirnics et al 2001; Fong & Hung 2002; Chung et al 1995; Hills & Mackenzie 2002; Jensen & Dam 1992; Lai et al 1990).

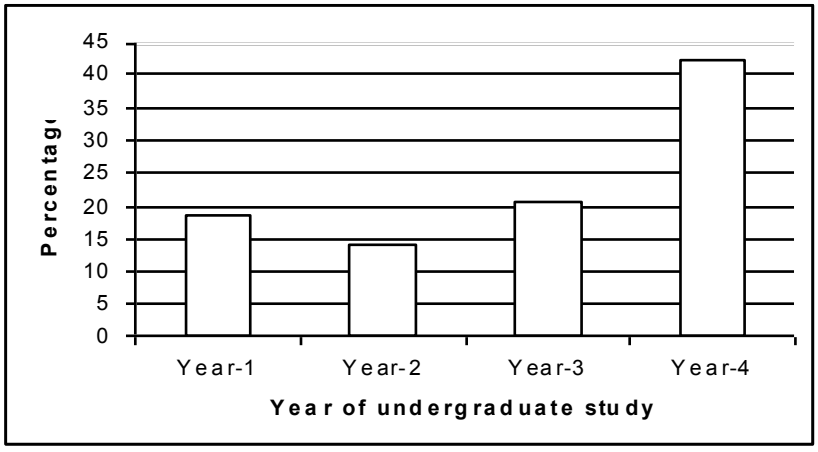
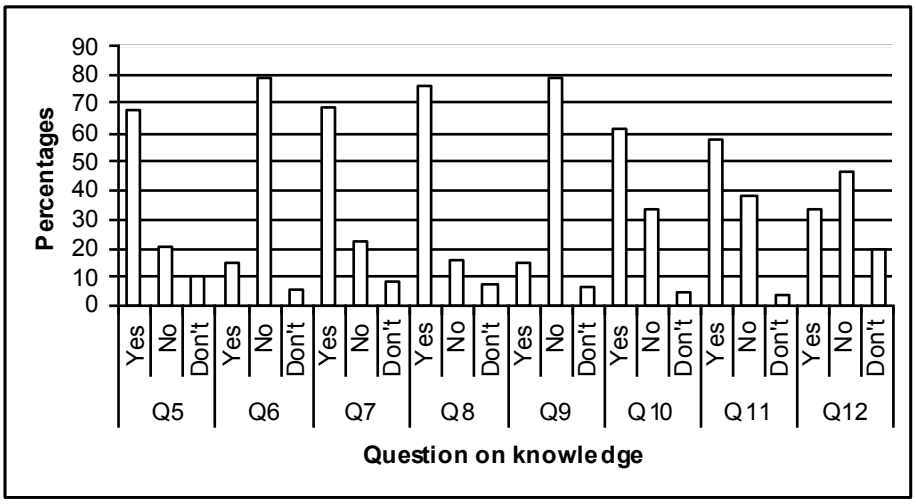


Figure 1: Percentages of respondents from different year of undergraduate study

Figure 2: Percentages of respondents for individual questions on knowledge. Q numbers refer to question numbers in Table I



The educated individuals are less likely to have a negative attitude towards epilepsy, a reason for a high percent of the current study population (87.5%), the pharmacy students were positive towards patients academic education. Furthermore, majority of them (85.6%) believed that epileptic patients can perform routine activities and 46.8% respondents favored participation of patients in sports. Interestingly, in our study 14.4% of students thought that epilepsy is caused by evil spirits which is not different from the finding of several studies conducted in developing countries which reported about belief of patients and general population on evil spirits as a cause of the disease (Jilek-All et al 1997; Seneviratne et al 2002; Ndoye et al 2005). Similarly, Pakistan is one of the developing countries with low literacy rate thus a small population; even among the educated class could reflect the larger population's belief on evil sprit as the cause of epilepsy. However, a high percent of respondents (76.4%) could differentiate between mental illness and epilepsy.

In Pakistan, access to healthcare like other developing countries is limited, as is awareness about the same. Faith healers, traditional healers and other alternative therapists are often the first level of contact for individuals with neurological disorders, especially in rural areas (Shafiq et al 2007). Though it can not be directly inferred, yet perhaps this may be a reason for a thought among less than 50% of respondents that epilepsy can be treated and avoided by the use of antiepileptic drugs. Moreover, only 18.5% pharmacy students knew the antiepileptic drugs available in Pakistan. This may be due either of lack of knowledge or study year where they have not been taught about the disease.

Conclusion

The findings of this study identify the scarcity of knowledge and awareness, however majority of the respondents in the study population possessed positive attitudes towards epileptic patients. The findings also revealed the lack of formal education among the pharmacy students that might lead to their increased belief on evil spirit as the cause of epilepsy. In addition, pharmacy students in the study also believed in the necessity of dispensing or consultation of antiepileptic drugs by pharmacist that showed their trust on pharmacy profession.

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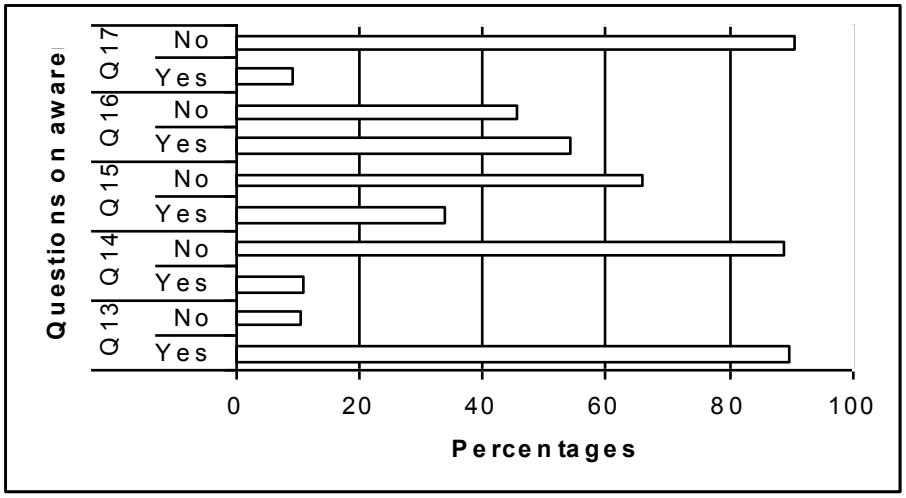
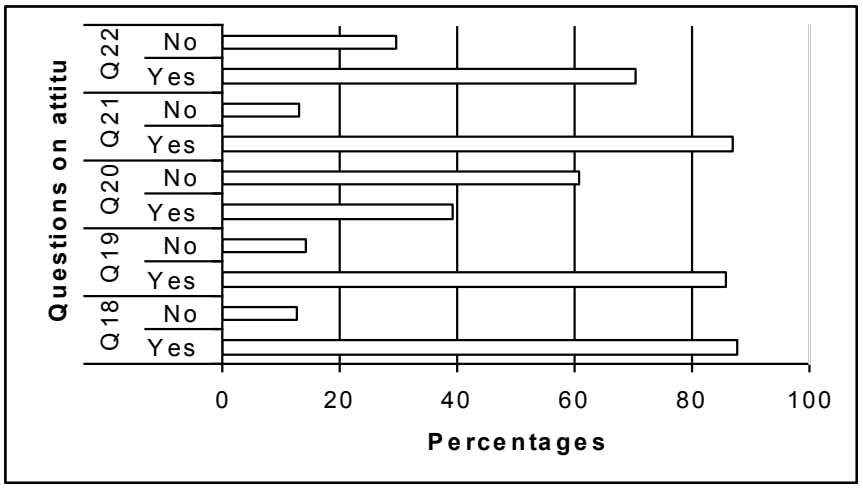


Figure 3: Percentages of respondents for individual questions on awareness. Q numbers refer to question numbers in Table I

Figure 4: Percentages of respondents for individual questions on attitudes. Q numbers refer to question numbers in Table I



We confirm that we have read the journal's position on issues involved in ethical publication and affirm that this report is consistent with those guidelines.

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