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Knowledge of Epilepsy in Students Attending the University of Mississippi Oxford Campus

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Knowledge of Epilepsy in Students Attending the University of Mississippi Oxford
Campus

by
Alyssa Leigh Reid

A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of
the requirements of the Sally McDonnell Barksdale Honors College.

Oxford
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Approved by

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Reader: Professor Erin Holmes

Reader: Professor David Gregory

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This thesis is dedicated to my mother, Lisa Utterback, who has been my main support system throughout my entire educational experience. She provided me with a shoulder to lean on and open ear whenever I needed one, and she taught me that hard work and determination pays off. I appreciate her love and support and I love her more than words could ever express.

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Abstract

Alyssa Leigh Reid: Knowledge of Epilepsy in Students Attending the University of Mississippi Oxford Campus
(Under the direction of Dr. Meagen Rosenthal)

Epilepsy is thought to be a very rare condition, and therefore many people do not know how to react or what to do when a person has a seizure. Epilepsy is in fact twice as common as cerebral palsy, muscular dystrophy, multiple sclerosis, and cystic fibrosis combined. Furthermore, there is not a cure to stop the seizures for many people.

Attending college is a challenging experience, but managing epilepsy while in college can be even more difficult. Hence it is important for all students to learn the basics of epilepsy and especially how to help a person having a seizure. However, before this education can be provided, an understanding of students' baseline knowledge is needed.

The primary objectives of this study were to assess the level of knowledge among the students attending the University of Mississippi Oxford campus and to determine the level of interest in a support group focusing on epilepsy.

An online survey, containing four sections, was distributed to University of Mississippi students via the university email system. A statistical analysis software package called Statistical Package for the Social Sciences (SPSS), was used to examine the frequency of correct quiz scores and the frequency of students with an interest in a support group.

Out of the 114 students that completed the survey, 112 answered the fifteen-question knowledge quiz. While some students demonstrated little knowledge of epilepsy, most students displayed an average amount of knowledge. Students participating in health professions programs appeared to score higher on the quiz than those who were not participating in health professions programs. There was an average level of interest in an epilepsy support group among the students. Considering the data, it appears that students at the University of Mississippi should receive additional education about epilepsy. One effective way to provide this education would be to include a mandatory seminar in the freshman orientation on epilepsy and how to help someone having a seizure.

Table of Contents

LIST OF TABLES.....	viii
BACKGROUND.....	1
METHODS.....	11
RESULTS.....	16
DISCUSSION.....	20
CONCLUSION.....	24
LIST OF REFERENCES.....	25

List of Tables

TABLE 1a	Demographics.....	28
TABLE 1b	Demographics Continued.....	29
TABLE 2a	Frequencies of Quiz Answers.....	30
TABLE 2b	Frequencies of Quiz Answers Continued.....	31
TABLE 3	Total Score of Survey Quiz.....	32
TABLE 4	Frequencies of Scores in Health Professions Majors vs. Non-Health Professions Majors.....	33
TABLE 5	Independent t-test for Equality of Means.....	34
TABLE 6	Interest in an Epilepsy Support Group.....	35

Background

According to the Epilepsy Foundation, epilepsy is the fourth most common neurological problem in the world,(1) but the number one most common serious neurological disorder,(2) making it far more common than most people suspect. Statistics from 2014 state that sixty-five million people in the world have epilepsy, including three million people that live in the United States.(1) A third of these people live with uncontrollable seizures, meaning they are unable to find an effective treatment. (3)

Epilepsy is a chronic disorder that affects people of all ages. It is primarily characterized by uncontrollable seizures, but can cause other health problems such as digestive problems including heartburn, nausea, constipation, diarrhea, and vomiting.(4) Epilepsy has also been linked to heart and breathing issues including increased risk of heart disease and stroke.(4) For pregnant women, epilepsy is associated with “a higher risk of hypertension, delivering an underweight baby, and stillbirths.”(4) In general, epilepsy has a substantial effect on a person’s body.

Epilepsy is primarily referred to as a “seizure disorder.”(3) A seizure is a sudden surge of electrical activity in the nerve cells of the brain, which is caused by chemical changes in those nerve cells.(3) Nerve cells of the brain can excite other nerve cells to send a message through electrical impulses and they can also inhibit other nerve cells from sending these messages.(3) Normally, there is a balance between the nerve cells that excite and nerve cells that inhibit; but when a seizure occurs, there is some sort of imbalance between these two types of cells.(3) The severity and characteristics of the

seizure are determined by the location of the electrical surge, how and to where it spreads, how long it lasts, and how much of the brain is affected.(3)

A physician diagnoses a person with epilepsy when they have at least one seizure that isn't associated with a reversible medical condition, such as alcohol or drug withdrawal or diabetic shock.(3) Six out of ten people who have been diagnosed with epilepsy are unable to determine the cause of their seizures.(3) Epilepsy is called a "spectrum condition" because it has a wide range of seizure types and range of control, which varies for every person.(3) Seizure types are typically characterized by when the seizure occurs, the person's level of awareness, and the amount of movement during a seizure.(5) The three major types of seizures are generalized onset seizures, focal onset seizures, and unknown onset seizures.(5) Many people who have epilepsy experience more than one type of seizure. Although these seizures can be debilitating, the Epilepsy Foundation states that the "public perception and misunderstanding of epilepsy causes challenges often worse than the seizures" and "[the public] perception and treatment of people with epilepsy are often bigger problems than [the] actual seizures."(3)

Epilepsy in College Students

Living with epilepsy can affect people in many ways and it can be especially difficult for people attending college. For some students with moderate to severe seizures, they affect not only their ability to attend lectures, but the time they have outside of class.

One of the most obvious aspects of epilepsy that affects a student's college experience is the physical effect seizures have on the body.(6) Understandably, a physically noticeable seizure during class will halt any teaching or learning that is

occurring.(6) Seizures can also drain a person's energy and sometimes, a person who has just had a seizure needs time to rest.(6) One student stated "...quite often I'm sick [after the seizure] as well. I'm like very groggy, and then tired really and I just need to sleep, and I sleep for about 3 or 4 hours."(6) This means that the student is missing valuable information pertaining to the class.(6)

For some students, injury during a seizure is not uncommon. One student said, "It seemed at one point I was always injured. I always had a burn or, a cut. I don't know how they happened, but I'd put the kettle on one day and then came around and was burnt all down my body—I'd put scalding water on myself."(6) If injury occurs and a doctor's visit is necessary, the student might be unable to attend class for hours or even days. (6)

Another factor of epilepsy that affects a student's life is the emotional impact. Understandably, a seizure can leave the student feeling stressed or upset. This is portrayed by one student on the website of the Epilepsy Foundation who said, "[After a seizure] I gradually sort of come round. I'm very distressed, really, really upset and I never know where I am. I don't usually know what's happened as well. I don't usually know I've had a seizure. Someone usually has to tell me. And then I get very upset, cry, cry a lot..." (6)

Another issue for a college student with epilepsy is memory loss, which can be caused by seizures in a variety of ways. A seizure in the left temporal lobe where verbal memories are stored can make it hard to remember words, meaning a seizure like this during a class lecture can make learning from a teacher or remembering assignments and concepts difficult.(6) A seizure in the right temporal lobe where visual memories are stored can make it difficult to navigate through a new campus.(6) This can cause the

student emotional distress and/or cause them to be late or miss a class.(6) A seizure in the frontal lobe where prospective memory, or memory about things to do in the future, is stored can make it difficult to remember to complete future assignments or homework.(6) This can also make a student forget about a test coming up in the near future, causing them to do poorly.

Similar to memory, concentration is also a factor for students with epilepsy.(6) Seizures can be very disruptive while they are occurring, as well as while the person is recovering from the seizure. This can lead a student's focus away from the material being covered in class, causing them to miss important details. Considering the physical and emotional impact, even having a seizure before class can cause a student to lack concentration during the class.

Stress can be a major issue for students with epilepsy; and for some students, a seizure can in fact be triggered by stress.(6) As one student remarked, "...also there is the fact that under stress I have more seizures. I mean, usually day to day my medication completely covers me and I'm fine, but if I'm really, really stressed out, like for example, I am just before an exam."(6) College is highly stressful and if seizures are triggered by stress, college can amplify the number of seizures a student has.(6)

A more discreet issue for college students with epilepsy is the social impact seizures can have. Although people may not realize it immediately, dealing with epilepsy in social situations can be very challenging. For example, a person with epilepsy must think seriously about who they want to tell about their epilepsy.(6) For some students, it is important that people they are living with know about their epilepsy "so that they know what to look out for, and how to help...during a seizure."(6) This disclosure is especially

important for students who experience frequent seizures.(6) However, this is a very sensitive area. One student described the difficulty of telling someone about his or her epilepsy; “When do you bring it up? When do you tell them? What point do you tell someone that I have epilepsy? And by doing so, by actually sitting down and telling them, are you [making] too much of a big deal about it? And I think in that way it’s made me very afraid [of telling people].”(6)

Another aspect of many college students’ social life is drinking alcohol. The chance of having a seizure can increase as the amount of alcohol consumed increases so when the student is drinking, they need to take precautions.(6) This is not the case for all students with epilepsy, but as one student described:

“Drinking alcohol can sort of increase the likelihood that I’m gonna have a seizure, so I try not to get really drunk. I try, if I’m drinking, to make sure that I’ve got all the other things sort of secure. Because if I’m really tired, and I haven’t eaten and then have a drink, I’m really likely to have a seizure. So if I try and kind of organise it more, just make sure that I’m not making it really likely that I’ll have a seizure, then it’s not too bad.”(6)

In a nutshell, students with epilepsy have to be constantly aware of their surroundings because of their epilepsy when participating in all social situations, particularly in situations where alcohol is involved.

While the physical effects of the disease itself has a major effect on students and their education, the medications used to treat epilepsy can also have a significant effect.(6) Firstly, finding a medication to control seizures can be disheartening. While approximately 60% of people respond to the first one or two drugs they are prescribed,

36% of people with epilepsy do not respond to the early medications prescribed.(7)

According to the Epilepsy Foundation, “when the first few seizure medications don’t stop or control a person’s seizures, the chances are not good that a different medicine will be successful.”(7) Trying to find a medication that works while in college can leave a student disappointed, and can distract them from their studies.

Secondly, some epilepsy medications have serious side effects that aren’t conducive to learning, such as: liver and blood toxicity, vomiting, blurred or double vision, and kidney stones.(8) Others have more marginal side effects such as drowsiness, inability to process information, or diminished capacity for remembering things.(6) While less serious in some respects, these side effects can still make it difficult to pay attention or stay awake in class, understand what is being taught, or remember assignments or concepts.

Preconceptions About Epilepsy

Though it is a very common neurological disorder, there are still many misconceptions about epilepsy thriving around the world. Two of the most common misconceptions can be physically detrimental to a person with epilepsy. It is commonly said that when a person starts seizing, you should force something into their mouth so they cannot swallow their tongue, and you should hold them down so they do not hurt themselves.(1,9) These two statements are entirely false and these actions can actually cause serious damage. Firstly, it is physically impossible for someone to swallow their own tongue during a seizure and forcing something into the person’s mouth can cause unnecessary damage including chipped teeth, cut gums, and even a broken jaw.(1,9)

Holding a person down during a seizure is also very dangerous and can lead you to accidentally harm to the person who is seizing.(1,9) The correct course of action is to roll the person onto their side and carefully place pillows or other soft objects around them.(1,9) This will keep them from bumping into anything and causing injuries to themselves. In conclusion, you should not relocate a seizing person unless it is absolutely unavoidable. (1,9)

As mentioned earlier, many people still believe that epilepsy is a rare phenomenon, however, this is not true.(1,9) Compared to other conditions epilepsy is twice as common as autism, Parkinson's disease, multiple sclerosis, and cerebral palsy combined.(1,9) Many also believe epilepsy only occurs in children, but epilepsy can occur in people of all ages.(1,9) In fact, the number of people over the age of sixty-five with epilepsy is roughly equivalent to the number of children with epilepsy.(1,9)

Another widespread misconception is that epilepsy is contagious.(1,9) In a survey administered to university students in Kuwait, 1.7% of students believed epilepsy was contagious.(10) In truth, epilepsy is a neurological disorder and it cannot be transmitted from person to person in any way.(1,9) Another commonly believed myth is people with epilepsy find it difficult to maintain a steady job and can not handle a high stress job.(1,9) In the survey administered in Kuwait, 26.2% of the students stated they would not employ a person with epilepsy in an office setting.(10) Similarly, a survey administered to university students in Yemen showed 37% would not employ a person in an office setting.(11) Realistically, the type and severity of seizures among people with epilepsy is incredibly varied.(3) While it is true that some people with epilepsy, such as those who

have frequent debilitating seizures, cannot maintain a steady job, most people with epilepsy can do everything a person without epilepsy does.(1,9)

Another myth is that there are few people in the United States who have uncontrolled epilepsy; similarly, many of these people also believe there is a cure or at least a medication that treats almost all cases of epilepsy.(1,9) This is not true. In fact, at least one million people in the United States currently have uncontrolled epilepsy, which is roughly a third of those who have been diagnosed with epilepsy.(1,9) People also believe that most people with epilepsy know what causes their seizures. Unfortunately, six out of ten people with epilepsy do not know the cause.(3) Many people with epilepsy live with uncontrolled seizures and have no knowledge of what causes them.(1,9) It is also a common misconception that epilepsy does not kill people. Although death in epilepsy isn't common, there are still people that die due to epilepsy.(1,9) The most common cause is Sudden Unexpected Death in Epilepsy (SUDEP) and one out of a thousand people with epilepsy die from SUDEP each year.(1) This equates to between twenty-two thousand to forty-two thousand deaths in the United States every year.(1,9)

Some more unusual, but still frequent, misconceptions were explored in the two surveys administered to university students in Kuwait and Yemen. Twenty-three percent of students in Yemen and 10.5% in Kuwait believed epilepsy was a form of insanity, while 18% of students in Yemen believed it was a form of mental retardation.(10,11) Nearly 12% of students in Kuwait thought people who have epilepsy do not think the same way as those without epilepsy.(10) With regards to a spiritual outlook, 17.4% of students in Kuwait believed epilepsy was a punishment from God, 22% of students in

Yemen and 25% in Kuwait believed it was caused by an evil spirit, and 10% of students in Yemen and 34% in Kuwait believed it was caused by an evil eye.(10,11)

From a social standpoint, 12% of students in Yemen believed people with epilepsy should not be allowed to marry and 14% believed they should not have kids.(11) Likewise, 8% of students in Kuwait believed people with epilepsy should not marry, and 12.5% believed they should not bear children.(10) Nearly 65% of students in Yemen and 56% of students in Kuwait would not marry a person with epilepsy.(10,11) Roughly 23% of students in Yemen and 12.5% of students in Kuwait would not allow their children to play with another child that had epilepsy, and 12% of students in Yemen thought children with epilepsy should be isolated in general.(10,11)

These, and the other, misconceptions and myths show how little knowledge some people have of epilepsy.

Informing college students about epilepsy could diminish the frequency of these misconceptions, and help demolish negative behavior and thoughts towards those with epilepsy. More importantly, improved education can help students to know how to react and what to do when someone has a seizure.

There have been a moderate number of studies on the misconceptions of epilepsy among college students in other parts of the world. To the best of our knowledge, there have not been any surveys on the knowledge of epilepsy among university students at the University of Mississippi or in the United States in general. Furthermore, the studies done in other countries focused more on student's perceptions of the students with epilepsy instead of misconceptions about the disease itself. The objective of this survey was to explore epilepsy knowledge of students at the University of Mississippi, as well as the

interest in a support group for students with epilepsy or those who know someone with the condition.

Methods

Study design:

An online survey design was used for the proposed study. Surveys are more appropriate for distribution amongst a large number of students. An online survey does not provide detailed, lengthy answers, but for this research project more straight forward, succinct responses were needed to collect demographic data and assess the baseline knowledge of epilepsy among University of Mississippi students. Using an online survey also provided a more representative look at the student population. If an interview study had been undertaken, there would be less generalizability of the sample, because those who participated in the interview would likely do so because they had a particular interest in the outcome of the research.(12)

Another reason a survey was beneficial in this situation was because it offered less bias than an interview. In an interview, the interviewee may be influenced by the body language or speech cues unknowingly given by an interviewer.(13,14) This can cause the interviewee to give a “more social[ly] desirable answer.”(14)The interviewee could also feel uncomfortable around the interviewer so they might not give complete answers which could affect the data.(13–15) Lastly, I used an online survey because it was convenient for the participants to navigate and required less time to complete.(15)

Sample:

The target sample was students attending the University of Mississippi in Oxford, MS. In 2016, there were approximately 22,503 students that attended the University of Mississippi Oxford campus.(16) Most of the students (18,101) were undergraduate students.(16) Approximately 56% of those students were female and 44% were male.(16) The overwhelming majority (92.1%) of the students were attending school full-time while only 7.9% were attending part-time.(16)

Concerning ethnicity, 0.1% were Native Hawaiian/Pacific Islander, 0.3% were American Indian or Alaskan native, 1.6% were Asian, 2.8% were Hispanic/Latino, 14.3% were African American, and 76.2% were Caucasian.(16) In addition, there were 0.2% of students that had an unknown ethnicity, 2.5% that were a non-resident alien, and 2% that were a mixture of two or more races.(16) Students who were residents of Mississippi made up 56% of the student population, with the remaining 44% encompassing the students from other states and countries.(17) We chose to include all classifications, races, genders, residence states, and statuses in order to obtain a representative sample of the student population on the Oxford campus.

We chose to include only students on the Oxford campus because it had the most students, and therefore the most probability of interest in an epilepsy support group.

The sample data was collected with the help of the University through an application process sponsored by the Department of Institutional Research, Effectiveness, and Planning. The University of Mississippi provides research students with a method to randomly distribute Qualtrics surveys through email to other students. This method

randomizes which students receive the survey and keeps students' personal information concealed.

Survey:

The survey was comprised of four sections. The first section started by asking the participant demographic questions. Specifically, they asked about age, gender, and whether the students were a health professions or non-health professions major. The survey then asked whether the participant knew what epilepsy was and whether they had been diagnosed with epilepsy before. Using skip logic, the survey then divided the participants into people with epilepsy and people without.

In the second section, people with epilepsy were asked whether they believed they were receiving adequate resources to help them navigate college life with epilepsy and whether they would be interested in a support group for those with epilepsy on campus. They were asked if they take medicine to control their epilepsy and if they replied yes, they were asked how well they felt the medication worked and if they could get their medications filled at the Health Center pharmacy on campus. There was an option for those who choose to fill their prescriptions somewhere besides the Health Center pharmacy as well.

People who said they had been diagnosed with epilepsy were then asked if the health center was helpful with issues related to their epilepsy, if they received scholarships or grants to help manage the financial burden of epilepsy, if they were registered with Student Disability Services, what resources the University of Mississippi offered them, and if there were resources they wished were offered. If they wished there

were other resources offered by the school, they were then given the chance to give a short answer detailing these resources.

Next, those with epilepsy were asked how many people they had told about their epilepsy and if those they had told knew what to do and who to call when a seizure occurred. They were also asked if people had ever avoided them when their epilepsy was revealed. Finally, they were asked if they would be interested in an epilepsy support group.

In the third section, those without epilepsy were asked if they knew someone with epilepsy. All of these participants were then told they would be asked questions to help us assess their knowledge of epilepsy. This section was comprised of fifteen true or false questions based on common myths about epilepsy taken from the literature. For example, the students were given the statement, “It is possible for a person having a seizure to swallow their tongue,” and then had to decide if it was true or false.

After completing the quiz, those who didn’t know anyone with epilepsy were directed to the end of the survey and thanked for their participation. In the fourth section, those who knew someone with epilepsy were asked if they would be interested in an epilepsy support group for those with the disease or those who know someone with disease.

Procedure/data collection:

After receiving IRB approval, I went to the University Department of Institutional Research, Effectiveness, and Planning’s website and filled out an application to distribute the survey to the students of the University of Mississippi. Through this process I decided

to send the survey link to 1,000 students to create a large enough potential sample size to represent the population adequately. I also decided to keep the survey open for two and a half months, and to send out a reminder email each month to increase the responses.

The survey was distributed and the 1,000 university students received an email from the University of Mississippi inviting them to complete the survey through the survey link provided. Qualtrics collected all anonymous survey responses and organized them on a secure server, where my thesis advisor and myself could access them. The first reminder was sent a month after the first email and the second email reminder was sent a month after the first reminder. Two and a half months after the survey was sent, the survey was closed and no more responses were collected.

Analysis:

Using SPSS, descriptive statistics were performed on the demographics questions collected in the survey. The quizzes were then scored, and the frequency of correct answers for each question and the number of correct answers given by each participant was also calculated using descriptive statistics. Using descriptive statistics, the frequency of participants with an interest in an epilepsy support group was also analyzed. Then an independent sample t test was used to compare the mean quiz scores between health professions students and non-health professions students.

Results

Demographics

A total of 114 students completed the survey. Approximately 74 students were female, comprising 64.9% of the sample. Roughly 88% of respondents (101 students) were considered full time. Forty of the students were part of the College of Liberal Arts, making up 35.1% of the sample and making it the most represented school. Over half of the participants were residents of the state of Mississippi, making it the most represented state in the sample. The next most represented states were Pennsylvania and Tennessee, comprising 5.3% each of the population. Most of the respondents self-identified as white (98 students and 86% of the sample.) Students between the ages of 18 and 25 comprised 89.5% of the sample. The classification of the students were relatively equivalent with seniors being the most represented at 28.9% and graduate students being the least represented at 13.2%. Of the 114 students, 91 of them were not participating in a Health Professional Program. For more detailed statistics, please refer to table 1.

The demographics of the respondents were generally similar to those of the University of Mississippi. Both populations were made up of mostly full-time students and female students. Most of the students in both populations were residents of Mississippi and most were Caucasian.

Students without Epilepsy

Students without epilepsy (112 of the 114 respondents to the survey) were given a fifteen-question quiz to assess their level of knowledge of epilepsy. Two of the questions were answered correctly by all participants, while five of the questions had 50-74% accuracy and five had 75-99% accuracy. For the exact frequency of correct answers given for each quiz question, please refer to table 2.

Concerning student scores, 11.4% of students answered 7-8 questions out of 15 correctly, 54.3% of students answered 9-11 correctly, 32.4% answered 12-14 correctly, and 0% answered all 15 questions correctly. For exact frequencies of total scores for all 112 students, please refer to table 3. For frequencies of total scores by those participating and those not participating in a health professions program, please refer to table 4.

An independent t test was performed to determine whether there was a significant difference in the quiz scores of those participating in health professional programs and those that were not. The confidence interval for this independent t test was 95% and the alpha level was 0.05. As shown in table 5, the p value for a two-tailed test was 0.014 (less than the alpha level), indicating that there was a statistically significant difference between the scores of health professions majors and non-health professions majors. Looking at the proportions in table 4, it appears that the health professions majors had more knowledge of epilepsy than the non-health professions majors.

Students with Epilepsy

Two of the 114 students in the sample had been diagnosed with epilepsy. One of the students was on medication for their epilepsy and stated that they felt the medication definitely helped them. This student said they chose to fill their prescriptions somewhere

other than the pharmacy in the University of Mississippi's health center. When asked whether the health center was helpful with issues related to their epilepsy, one student had neutral feelings about whether the health center would be helpful in dealing with their condition. The other said "I go to a physician off campus."

Neither student received scholarships or grants to help manage the financial burden of epilepsy. Only one of the students was registered with the Student Disabilities Services. One of the students confirmed that the following services had been offered to them by the University of Mississippi: note-taker for classes, extra time on exams, rest breaks during exams, taking exams in a separate room, and counseling services. Both students said there were not any other resources they wished the University of Mississippi provided for their condition.

When asked how many of their friends and/or acquaintances they had told about their epilepsy, one student said they had told most of them and the other student said they had told a few of them. Both students stated that those who knew about their epilepsy knew what to do and/or who to call when a seizure occurred. Finally, one student said they had been avoided by someone because of their epilepsy.

Epilepsy Support Group

Of the 112 students who had not been diagnosed with epilepsy, 45 knew someone who had been diagnosed with epilepsy. Considering these 45 students, 17% said they would be interested in an epilepsy support group, 29.8% said they might be interested, and 53.2% said they would not be interested. Considering the two students who had been diagnosed with epilepsy, one said they would be interested in a support group and one

said they would not be interested. The proportions of these students can be found in table 6.

Discussion

The focus of this project was to determine the level of knowledge about epilepsy among students at the University of Mississippi Oxford campus and to assess the students' interest in an epilepsy support group. Most students who did not have epilepsy had an average understanding of epilepsy, but some had very little understanding. Those who were participating in health-profession programs appeared to score better on the quiz, and therefore had a better understanding of epilepsy than those not participating in a health professions major. The students with epilepsy were surveyed to assess their satisfaction with resources provided by the university for their condition. These students were satisfied with the resources, and did not have any suggestions for any other resources they might need. There was some interest in an epilepsy support group on campus among the students that were surveyed.

This study was similar to those studies done in Kuwait and Yemen. All three studies focused on college students' perceptions of epilepsy or students with epilepsy.(10,11) Unlike the other studies, this study focused on misconceptions about the disease itself while the studies, done in Kuwait and Yemen, focused on the perceptions about the people with epilepsy.(10,11) This study also focused on different misconceptions/perception than those in the Kuwait and Yemen studies.(10,11)

This study was very similar to ones done in Canada and Australia because all of the studies used a survey to assess the level of knowledge among university

students.(18,19) The study in Australia had some of the students watch a video about epilepsy and then take the survey to determine a difference in knowledge between those who watched the video and those who didn't.(19) In Canada, the students were given a survey before and after they read a brochure on epilepsy to determine the differences in the level of knowledge.(18)

The study I conducted, the study done in Australia, and the study done in Canada were all focused on the level of knowledge of epilepsy among university students; however, the study I conducted only measured the level of knowledge and did not involve an intervention like the other two studies did.(18,19) The other two studies also focused on perceptions of those with epilepsy, similarly to those completed in Yemen and Kuwait, while my study did not.(18,19) The results of all three studies showed that students had little to average knowledge of epilepsy to begin with, but the Australian and Canadian studies showed that the video and brochure, respectively, improved knowledge of epilepsy in the students.(18,19)

Finally, the study I conducted was somewhat similar to a study done in Brazil among first, third, and sixth year medical students.(20) Both studies used a survey to determine the students' level of knowledge.(20) However, the study in Brazil compared three categories of medical experience with varying degrees of knowledge and this study compared health professions student and non-health professions students.(20) Both studies showed a need for more education provided to the students concerning epilepsy and a positive relationship between level of medical knowledge and level of knowledge of epilepsy.(20) Like the studies done in Australia and Canada, the study done in Brazil

also included the students' perceptions of those with epilepsy, rather than perceptions of the disease itself.(18–20)

Limitations

There were a few important limitations to this study. One of the limitations was the number of students with epilepsy that completed the survey. There are likely more than two students on campus with epilepsy and therefore the data collected cannot be generalized to the university population as effectively as we would like. Another limitation was the general number of students that completed the survey. Only 114 students completed the survey and while this is a decent number of responses, it is not enough to generalize the results to the entire population of students at the University of Mississippi.

Implications

The data collected can be used as a foundation for a number of additional studies. Firstly, this data can be expanded upon through a survey with a larger number of students to get more generalizable results. Then the expanded data can be used to determine whether or not the students need to be educated about epilepsy in order to protect those university students with epilepsy. If the data indicates the students need to be educated, there are several ways this can be achieved. In a study done in Canada, they used a brochure to educate a class on epilepsy, which appeared to be an effective method. (18) Another study done in Australia used a video to educate the students and this also proved

to be effective. (19) These are just two examples of the type of presentation that could be used to educate students.

I think the biggest issue would be how, when, and where to provide the information to the students. One option is hosting a seminar to present the information. This seminar could occur during freshman orientation. I think this would be the most effective way to give the information to the largest number of students since freshman orientation is required. Another option would be to send an email to the entire school with the information, but I'm not sure this would be very effective due to lack of compliance in reading the information.

Another study that could be performed with the expanded data could focus solely on the satisfaction of epilepsy students with the resources provided by the university. In order to make this study effective, there would need to be a greater number of students with epilepsy surveyed. If suggestions are given by the students on how to improve resources, the university can examine these suggestions and decide how to proceed.

Finally, the expanded data could be used to focus more on the interest of the students in an epilepsy support group. If there is a decent amount of interest, an epilepsy support group can be formed where students can come and discuss their concerns or issues concerning their epilepsy or the epilepsy of someone they know. Ideally, the support group would meet either every two weeks or once a month to be effective, but still respect the lack of time most students have. The support group can meet in the afternoons and rotate days and times of the meeting to try to avoid scheduling conflicts for most of the students. These details could be an integral part of the study.

Conclusion

This study was completed to assess two things: the level of knowledge about epilepsy among the students and the level of interest in an epilepsy support group. The results of the study showed an average level of knowledge of epilepsy among most of the students. It also appears that there was a decent amount of interest in an epilepsy support group among students with epilepsy and students who know someone with epilepsy. This data can be used as a foundation for other studies that can increase the quality of life and safety of students with epilepsy that attend the University of Mississippi Oxford campus.

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Table 1a: Demographics		
		Proportion (Frequency)
Gender	Male	35.1% (40)
	Female	64.9% (74)
Student Status	Full Time	88.6% (101)
	Part Time	11.4% (13)
Type of School	College of Liberal Arts	35.1% (40)
	Graduate School	13.2% (15)
	School of Applied Sciences	11.4% (13)
	School of Business Administration	10.5% (12)
	Patterson School of Accountancy	9.6% (11)
	School of Education	7.0% (8)
	General Studies	6.1% (7)
	Meek School of Journalism & New Media	4.4% (5)
School of Pharmacy	2.6% (3)	
Residence	Non-resident	40.4% (46)
	Resident	59.6% (68)
State	Mississippi	59.6% (68)
	Pennsylvania	5.3% (6)
	Tennessee	5.3% (6)
	Texas	4.4% (5)
	Florida	3.5% (4)
	Illinois	2.6% (3)
	Missouri	2.6% (3)
	Georgia	1.8% (2)
	Ohio	1.8% (2)
	Oklahoma	1.8% (2)
	Virginia	1.8% (2)
	Arizona	0.9% (1)
	Arkansas	0.9% (1)
	Indiana	0.9% (1)
	Louisiana	0.9% (1)
	Minnesota	0.9% (1)
	Montana	0.9% (1)
	New Jersey	0.9% (1)
New Mexico	0.9% (1)	
Oregon	0.9% (1)	
South Carolina	0.9% (1)	
Vermont	0.9% (1)	

Table 1b: Demographics Continued		
		Proportion (Frequency)
Ethnicity	Asian	0.9% (1)
	Black	6.1% (7)
	Hispanic	4.4% (5)
	Two or More	2.6% (3)
	White	86% (98)
Age	18-25	89.5% (102)
	26-35	4.4% (5)
	Older than 35	6.1% (7)
Classification	Freshman	22.8% (26)
	Sophomore	17.5% (20)
	Junior	17.5% (20)
	Senior	28.9% (33)
	Graduate Student	13.2% (15)
Participation in a Health Professional Program	Yes	20.2% (23)
	No	79.8% (91)

Table 2a: Frequencies of Quiz Answers		
		Proportion (Frequency)
It is possible for a person having a seizure to swallow their tongue.	Correct (False)	45.5% (51)
	Incorrect (True)	54.5% (61)
You should put something in a seizing person's mouth to protect them from damage.	Correct (False)	67% (75)
	Incorrect (True)	33% (37)
When a person has a seizure, you should hold them down to keep them from harming themselves.	Correct (False)	50% (56)
	Incorrect (True)	50% (56)
Epilepsy is contagious.	Correct (False)	100% (112)
	Incorrect (True)	0% (0)
Only children have epilepsy.	Correct (False)	100% (112)
	Incorrect (True)	0% (0)
People with epilepsy cannot work a steady job.	Correct (False)	92.9% (104)
	Incorrect (True)	7.1% (8)
People with epilepsy cannot handle a job with high stress and responsibility.	Correct (False)	78.6% (88)
	Incorrect (True)	21.4% (24)
Epilepsy is a rare condition. *	Correct (False)	71.2% (79)
	Incorrect (True)	28.8% (32)
Epilepsy does not kill people. *	Correct (False)	86.5% (96)
	Incorrect (True)	13.5% (15)
There is medication that treats almost all cases of epilepsy. *	Correct (False)	48.6% (54)
	Incorrect (True)	51.4% (57)
There is a cure for epilepsy. *	Correct (False)	99.1% (110)
	Incorrect (True)	0.9% (1)
Few people in the US have uncontrolled epilepsy. **	Correct (False)	52.7% (52)
	Incorrect (True)	47.3% (58)
Behavior during seizures varies from person to person. **	Correct (True)	91.8% (101)
	Incorrect (False)	8.2% (9)

*1 person did not answer this question.

**2 people did not answer this question.

Table 2b: Frequencies of Quiz Answers Continued		
		Proportion (Frequency)
Behavior during seizures varies from seizure to seizure in one person. **	Correct (False)	18.2% (20)
	Incorrect (True)	81.8% (90)
Most people know the cause of their seizures. **	Correct (False)	68.2% (75)
	Incorrect (True)	31.8% (35)

*1 person did not answer this question.

**2 people did not answer this question.

Table 3: Total Score of Survey Quiz	
Number of Correct Answers (Out of 15)	Proportion (Frequency)
7	3.5% (4)
8	7.9% (9)
9	14.9% (17)
10	21.9% (25)
11	17.5% (20)
12	19.3% (22)
13	10.5% (12)
14	2.6% (3)

Table 4: Frequencies of Scores in Health Professions Majors vs. Non-Health Professions Majors								
	Total Score							
	7	8	9	10	11	12	13	14
Health Professions Major*	0 (0%)	1 (4.3%)	2 (8.7%)	4 (17.4%)	4 (17.4%)	6 (26.1%)	5 (21.7%)	1 (4.3%)
Non-Health Professions Major**	4 (4.5%)	8 (9%)	15 (16.9%)	21 (23.6%)	16 (18%)	16 (18%)	7 (7.9%)	2 (2.2%)

Frequency (Percentage)

*23 of the 112 students that answered the quiz were health professions majors.

**89 students were not health professions majors.

Table 5: Independent t-test for Equality of Means				
t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
2.508	110	.014	.96580	.38515

*Equal variances assumed

Table 6: Interest in an Epilepsy Support Group			
	Interested	Might Be Interested	Not Interested
People with Epilepsy	50% (1)	0% (0)	50% (1)
People that know someone with Epilepsy*	17% (8)	29.8% (14)	53.2% (25)

*67 people did not have or know anyone that had Epilepsy, therefore, they were not required given this question.