Meningitis: What do college students know?
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ABSTRACT: Meningitis is an inflammation of the membranes that cover the brain and spinal cord. It is caused by a bacteria or virus and transmitted from person to person. College students, especially freshmen, living in dorms are at increased risk of contracting meningitis and should be vaccinated before entering college. The purpose of this study was to determine what college students actually know about meningitis, how many have received the vaccine before entering college or during college years, and what prompted them to receive the vaccine. The design used for this research was descriptive.

There were 484 students that were surveyed. Only 45% had been vaccinated for meningitis and 55% of students surveyed had not been vaccinated. Only 23% of students believed that they were at high risk for contracting meningitis in relation to 83% who did not believe they were at a high risk. The findings also showed that education and business majors (79%) were more likely to receive the meningitis vaccination than science majors (76%) and art majors (61%). The findings also indicated that more science majors (45%) believed they were at high risk for contracting meningitis than education/business majors (42%) and art majors (22%).

Education is a vital part to the prevention of meningitis. Most of the students who received the vaccine did so because of school requirement. Therefore, more education needs to be done by nurses and professors to equip students about the risks of the disease and the benefits of the vaccination.

STUDY PROBLEM: College students, especially freshmen, living in dorms are at an increased risk of contracting meningitis. Many college students do not have adequate information about Meningitis or the vaccine to make an educated decision on how to prevent the disease and whether or not to be vaccinated.

STUDY PURPOSE: The purpose of this study was to determine what college students know about meningitis and what needs to be done in the future within colleges to ensure majority vaccination rates.

THEORETICAL BACKGROUND: The theory of self care and self-care deficit laid out by Orem is the theoretical basis for this study. Orem explains self-care as the activities carried out by the individual to maintain his or her own health (Current Nursing, 2009). Being vaccinated to protect against preventable diseases is an activity that individuals choose in order to maintain their health. The ability to perform self-care is easily affected by basic conditioning factors such as age, gender, health care system, family system, and socioeconomic status. Deficits appear in self-care when there are inadequacies in health, developmental, or universal (general) needs. Through nursing assessments deficits can be identified and care can be provided according to the degree of deficit the patient is presenting. In the case of vaccination against meningitis and understanding the severity of the disease, there can be many factors contributing to a deficit in self-care. Some of the deficits include (but are not limited to), age, race, gender, education level, socioeconomic status, availability of health care facilities, religion, and peer pressure. By identifying factors that are causing deficits in self-care concerning vaccination, nurses can help educate patients and increase vaccination rates thus improving self-care.

LITERATURE REVIEW:
Meningitis is an inflammation of the membranes that cover the brain and spinal cord. It is caused by a bacteria or virus and transmitted from person to person. College students, especially freshmen, living in dorms are at increased risk of contracting meningitis and should be vaccinated before entering college. A person’s life could be completely changed and even ended within 24 hours of exposure. This is why parent and student education about the contraction of meningitis and the availability of the vaccine is important.

A massive outbreak of meningitis in 1997 at Michigan State University gave researchers Paneth et al. (2000) an opportunity to study factors that contribute to college students’ compliance with mass vaccination programs. The researchers compared the information about the vaccine recipients received at the time of mass vaccination to the student computer database, and then were able to assess the effect of student characteristics and the likelihood of students being vaccinated. What the researchers found was a steady decline in vaccination rates between the younger students and the older students. Women were found to be more likely than men to be vaccinated and students who were of a white or an Asian ethnicity were more likely to be vaccinated than students of other ethnicities. Also, students who studied business or studied in the sciences were more likely to receive the vaccination than the students that were studying in the arts or humanities fields (Paneth et al., 2000).

The next study examined the difference between meningococcal vaccination rates with and without education of students. The study identified that first year college students living in dorms were at a high risk of contracting meningitis. The findings of their research concluded that some students who were introduced to the educational information about the meningitis vaccine while they were still living at home and under parental encouragement and advice from their doctor were more likely to be vaccinated than students who waited until they moved away from home and onto the college campus.
The researchers conducted this study using a cross-sectional survey. What was found in this study was that people who were more likely to agree to vaccination consisted of students who were up to date on their MMR, DT and flu vaccinations, as well as students who had seen their doctor within the last 6 months. Students who were not likely to agree to vaccination were students who smoked, binge drank, hung out at bars, participated in active and passive cigarette smoking and cigarette or drink sharing (D’Heilly, Ehlinger, Nichol, 2006).

Past research has stated that broader, multi-institutional studies need to be performed to further identify those most at risk for the disease and for choosing not to be vaccinated. All studies reviewed pointed to the fact that education was vital in increasing vaccination rates.

RESEARCH QUESTIONS:
- What do college students know about meningitis?
- How is the percentage of surveyed students receiving the vaccine before entering college compared to that of students who received it during college years?
- Of students receiving the vaccine, what were the factors that prompted them?

SETTING: The settings that were used in this study were the campuses of LaGrange College and West Georgia University. The questionnaires were sent out in classrooms, and in high traffic areas throughout each campus (library, cafeteria, etc…).

DESIGN: For this study, the design chosen was descriptive. Researchers used this design to assess how much college students know about meningitis, its transmission and whether or not they are aware of preventative measures such as the vaccine.

SAMPLING PROCEDURE/CHARACTERISTICS: A convenience sample of 484 LaGrange College students and West GA University students was used for this study. Inclusion criteria were college students between the ages of 18-24 who read and spoke English.

DATA COLLECTION STRATEGIES/INSTRUMENTS: Data was collected through surveys and questionnaires. Students had the opportunity to complete the surveys via classroom settings, and social settings (cafeteria or other high traffic areas). To decrease the probability of receiving multiple questionnaires from the same participant, a notice was added to the survey that informed the participant not to complete survey if he or she has already completed one.

STORAGE, RETRIEVAL, ANALYZATION OF DATA: All surveys and information pertaining to confidentiality of participants were kept secured in the Nursing Department of LaGrange College. Only researchers and the nursing professor have had access to the information. Researchers received answered questionnaires personally in unmarked envelopes. Researchers took part in analyzing data using descriptive statistics. The data analyzed included: the percentage of students with basic knowledge of prevention and transmission of meningitis; the percentage of students receiving the vaccine due to parent/physician referral or due to their own choice; the percentage of arts/humanities majors who received the vaccine compared to the percentage of business and science majors who received the vaccine; and the percentage of students who received the vaccine during college compared to those who received it before college. All participant information and questionnaires will be shredded at the end of the study.

ETHICAL CONSIDERATIONS: Informed consent was implied through voluntary participation. All personal information was kept confidential as participants returned questionnaire’s in unmarked envelopes.

RESULTS:
The total number of students surveyed was 484; 209 of these students were male and 275 were female. Out of the 484 students that were surveyed, 45% said they had received the vaccine. However, 55% of students stated they had not received the vaccine or did not know if they had received it. Our findings showed that 87% of students believed they were not at a high risk for contracting meningitis and only 23% that believed they were at high risk for contracting meningitis. In general, the majority of students who received the meningococcal vaccine received it before entering college due to a school requirement. Only 44% of students surveyed knew the signs and symptoms of meningitis whereas 56% of students did not know the signs and symptoms of meningitis. Our findings also showed that education and business majors (79%) were more likely to receive the meningitis vaccination than science majors (76%) and art majors (61%). Our findings also concluded that more science majors (45%) believed they were at high risk for contracting meningitis than education and business majors (42%) as well as art majors (22%).

SUMMARY:
Meningitis is a problem within students living on-campus in college institutions. Based on former research, many
students have been unaware of the risks of the disease and the benefits of the vaccine. In this study, researchers found that the majority of students had not been vaccinated to prevent meningitis. Most of those who received the vaccine received it before entering college due to a school requirement. Overall knowledge of the disease was low and many students were not aware of why they had received the vaccine. More education needs to be done by nurses and professors to equip incoming college students and current college students about the risks, signs and symptoms, and transmission of this disease process as well as the importance of the vaccination.

References


MENINGITIS: WHAT DO COLLEGE STUDENTS KNOW?

The purpose of this study is to determine what college students know about meningitis and what needs to be done in the future within colleges to ensure majority vaccination rates. We are doing this study because an increasing number of college students every year is being diagnosed with meningitis. This number could be reduced with an increase in education about the transmission and prevention of meningitis. Therefore, we are interested in the general knowledge college students have about meningitis and what needs to be done in the future about education on the disease.

We would like to ask you to complete the attached questionnaire and please return it in one of the following ways:
1) If the researchers are present, place folded questionnaire into the available box.
2) If questionnaire is taken in the classroom, please return completed questionnaire to professor who has an unmarked manila envelope.

The following questionnaire is optional, the returned questionnaires will be treated with the utmost confidence and all information will remain confidential.

If you have any questions, concerns, or complaints about this research please contact one of the following:
• cfreilly@lagrange.edu
• kecurtis@lagrange.edu
• krshackleford@lagrange.edu
• lkallen@lagrange.edu

This questionnaire should take only 5 minutes of your time to complete. Participation in this study is voluntary. You can choose not to take part and you can also choose not to finish the questionnaire or omit any question you prefer not to answer without penalty or loss of benefits.

By returning this questionnaire completed, you are giving consent to participate.

The researchers would like to thank you for your time and participation.
What College Students Know About Meningitis: A Survey

Please circle the answer that best describes you.

AGE: 17-21  22-26  27 and older
GENDER: Male  Female
RACE: Caucasian  African American  Hispanic  Asian  Other
CLASS: Freshman  Sophomore  Junior  Senior

Please check:
_____ I live on campus
_____ I am a commuter

Please fill in the blank:
Current Area of Study/ Major: ________________________________

Do you think you have a high risk of contracting Meningitis? ___yes ___no

How do you think Meningitis is transmitted:
_____ kissing, sharing drinks, living with someone infected with meningitis
_____ hugging, shaking hands, using the same bathroom stall as someone infected with meningitis
_____ contact with blood

Do you think Meningitis can result in death? ___yes ___no
Do you think there is more than one strand/type of meningitis? ___yes ___no

What are the signs and symptoms of Meningitis? (check all that apply):
_____ fever  _____ runny nose  _____ rash
_____ headache  _____ weight gain  _____ diarrhea

What do you think could be some long-term effects of Meningitis? (check all that apply):
_____ hearing loss  _____ loss of limbs  _____ uncontrollable glucose levels
_____ hair loss  _____ vision disturbances  _____ coordination difficulties

Before taking this survey, did you know that you could receive a vaccine to help prevent meningitis?
_____yes  _____no

Have you received the Meningitis vaccine? ___yes  ___no
If the above answer is YES –
When did you receive the Meningitis vaccine: ___ Before entering college  ___During college years

What prompted you to receive the vaccine? (check all that apply):
_____ Physician/Nurse referral  _____ Personal decision based on your own research/education
_____ Parent/Guardian  _____ Other (please specify) ________________________________
_____ School Requirement