Perceptions, Beliefs, and Attitudes Regarding Monkeypox Virus Among Kentucky College Students

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INTRODUCTION & PURPOSE

Literature:

Monkeys, while rare, can dramatically impact the health of individuals and their communities. A recent study regarding the Monkeypox knowledge level among the general population in Saudi Arabia found that overall, knowledge of MPXV infection was “slightly poor” among the population, with only 45% of participants reporting to have a “high level” of knowledge regarding Monkeypox. (Alshahrani, et al., 2022). It is evident from these findings that the need for Monkeypox education is “urgent”, as this education could “promote awareness” and “engage the public” ahead of future outbreaks. (Alshahrani, et al., 2022). While prior research regarding knowledge of Monkeypox has been conducted in populations such as Healthcare workers or physicians, not much has been done in the population of college or university aged individuals.

Purpose of this study:

To assess the perceptions, beliefs, and attitudes regarding Monkeypox virus among a group of university students from a regional Kentucky institution. Because of its novel nature and recent outbreak, there is currently a lack of research regarding not only MPXV, but the impact of MPXV upon college-aged individuals. It is crucial to understand how college-aged students may perceive MPXV and what they may know and/or believe about MPXV in order to effectively create preparedness protocols and educational interventions to reduce the prevalence of MPXV among this student population.

Hypotheses:

1. Due to the novel nature of the infectious disease Monkeypox, university students will not be knowledgeable of Monkeypox
2. Due to the novel nature of the infectious disease Monkeypox, university students do not perceive themselves to be at risk for, or susceptible to Monkeypox infection
3. Due to the novel nature of the infectious disease Monkeypox, university students do not believe the disease to be of serious consequence

METHODS

Participants:

The target population that were studied included all eligible undergraduate students from a regional Kentucky institution. These students primarily ranged from the ages of 18-24 years, attended the university’s main campus, and were from a variety of demographic categories, including varied educational backgrounds, race/ethnicities, socioeconomic status, and fields of study.

Survey:

- Perceptions, Beliefs, and Attitudes of Monkeypox Virus, or P6A. This 27 item instrument was created by the authors using a previously validated and tested instrument (Assessment of Knowledge of Monkeypox Viral Infection Among the General Population in Saudi Arabia, Alshahrani, et al., 2022).
- Questions were modified and adapted to fit the needs of the target population with permission of the author's original source.
- The instrument was pilot-tested on a group of 10 graduate students from the same region.
- The instrument was created by the authors using a previously validated and tested instrument (Assessment of Knowledge of Monkeypox Viral Infection Among the General Population in Saudi Arabia, Alshahrani, et al., 2022).
- Items 2-27 were related to the pathogenesis, epidemiology, and signs/symptoms of MPXV. These items were knowledge based.
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- Distribution began on February 27th and ended on March 17th, 2023. In total, 106 participants were surveyed.
- Convenience Sampling – surveys were disseminated using the university affiliated email of eligible participants. Additionally, the electronic survey link was posted to social media platforms (Facebook, Instagram)

Data & Analysis:

Means, Proportions/Percentages, Frequencies, and a knowledge score were analyzed in conjunction with this research study.

RESULTS & GRAPHICS

Demographics:

The target population of this research study was undergraduate students who attend Eastern Kentucky University. Of the 106 responses collected through the electronic survey, the self-reported demographics include:

- While respondents were gathered fairly equally from each class year, second-year or Sophomore students yielded the highest response rate at 30.91% (N=34). The participants were mostly female, at 60% (N=66) and self-identified as White/Caucasian at 94.55% (N=104).
- Almost 1/3 of the participants self-reported to be heterosexual or straight (70.91%, N=78), followed by bisexual (15.45%, N=17), gay (5.45%, N=6), asexual (3.64%, N=4), lesbian (3.64%, N=4) and unsure (0.91%, N=1).
- While responses were collected from all six academic colleges on campus, as well as from exploratory/undeclared students, College of Business (COB) reported the most responses at 30% (N=33), followed by College of Letters, Arts, & Social Sciences (CLASS) at 26.36% (N=29) and College of Health Sciences (CHS) at 17.27% (N=19).

Knowledge Scores:

In order to establish whether the target population was or was not knowledgeable in relation to MPXV, an overall knowledge score was calculated. There were 15 knowledge questions. For each question a respondent answered correctly, 1 point was given. For each question a respondent answered incorrectly (or “I don’t know”), 0 points were given. 15 points was a perfect score (100%). A score of 11 or higher was considered “knowledgeable,” at 75% or higher. Any score less than 11 was considered “not knowledgeable” or below average.

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Knowledge Scores Comparison:

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The average knowledge score was 10 out of 15. Overall, the majority of respondents (N=80) received a knowledge score that was less than 11. Only 26 participants scored an N=11 out of 15, or above. A z-score was calculated to establish if these findings were statistically significant. The z-score calculated was 7.4175, with a p < 0.00001. Therefore, the findings are statistically significant and there is evidence to conclude that the majority of students were not knowledgeable about MPXV.

REFERENCES


Centers for Disease Control and Prevention. Retrieved February 8, 2023, from https://www.cdc.gov/poxvirus/monkeypox/response/2022/vaccines_data.html

Centers for Disease Control and Prevention. Retrieved September 29, 2022, from https://www.cdc.gov/poxvirus/monkeypox/transmission.html

Centers for Disease Control and Prevention. Retrieved September 29, 2022, from https://www.cdc.gov/poxvirus/monkeypox/about/index.html


RECOMMENDATIONS

- After the completion of this research study, there a few recommendations for future practice which include:
  1. Shorten the length of the survey instrument to increase the response rate of participants.
  2. Adapt the survey to include a pre and post test option, to be given along with a brief educational intervention related to MPXV and its epidemiology
  3. Broaden the target population to include other regional universities and colleges within the state and allow for comparison of general knowledge and trends
  4. Broaden the target population to include the general public
  5. Adapt the survey to include targeted questions related to stigma and the stigmatized beliefs surrounding MPXV infection

It is evident that more education and awareness is needed in relation to MPXV among university students, as well as academic research to better understand the disease.