



MASTER OF PUBLIC HEALTH

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

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INTRODUCTION & PURPOSE

Literature: Monkeypox, 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 MPX infection was "slightly poor" among the population, with only 48% of participants reporting to have "high levels" of knowledge regarding Monkeypox.

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 HMPX, but the impact of HMPX upon college-aged individuals.

Hypotheses:

- 1.1: Due to the novel nature of the infectious disease Monkeypox, university students will not be knowledgeable of Monkeypox.
1.2: 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.
1.3: Due to the novel nature of the infectious disease Monkeypox, university students do not believe the disease to be of serious consequence.
2.1: Social media, when compared to peers or research, will be the most reported source of Monkeypox related information reported by the survey respondents.

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, sociodemographic status, and fields of study.

Survey:

- Perceptions, Beliefs, and Attitudes of Monkeypox Virus, or PBA. 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, Alsharani, et al., 2022).
Questions were modified and adapted to fit the needs of the target population with permission of the original author
The instrument was pilot-tested on a group of 10 graduate students from the same regional Kentucky university
Items 1-6 were demographic questions, related to participant's current year of study, gender, race/ethnicity, and major of study
Items 7-21 were related to the pathogenesis, epidemiology, and signs/symptoms of Mpx. These items were knowledge based
Items 22-27 were related to constructs of the Health Belief Model and assessed the attitudes of participants related to Mpx, as well as a participants perceived severity and susceptibility of Mpx infection
Distribution began on February 27th and ended on March 17th, 2023. In total, 106 amount of 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 DATA & 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 responses 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 3/4 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 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 Mpx, 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 do not 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.

Table with 3 columns: N, Valid, 106; Missing, 14. Rows include Mean (8.0660), Median (8.0000), Mode (10.00), Std. Deviation (3.34741), Variance (11.205), Skewness (-.232), Std. Error of Skewness (.235), Range (15.00), Minimum (.00), Maximum (15.00), Percentiles (25: 6.0000, 50: 8.0000, 75: 10.2500)

Table with 5 columns: Frequency, Percent, Valid Percent, Cumulative Percent. Rows include Valid (0.00 to 15.00), Missing System (14), Total (120)

The average knowledge score was 10 out of 15. Overall, the majority of respondents (N=80) received a knowledge score that was less than 75%. Only 26 participants scored an 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 Mpx.

RESULTS & DISCUSSION

Generally, the target population of undergraduate students did not report a high level of knowledge related to Mpx. Much work is left to be done in both the research surrounding Mpx and its epidemiology, as well as in the education of the general public related to Mpx.

- Overall, respondents were able to conclude that Mpx is a viral, not bacterial, infection
Additionally, respondents were able to identify that the early symptoms of Mpx resemble the flu and that skin rash is an early sign of Mpx infection. However, there was uncertainty related to the transmission methods of Mpx, as well as the incubation period and infection length
While the majority of respondents reported that Mpx should be taken seriously by college students, only 10% of that same population reported feeling at risk for contracting Mpx
Similarly, 90% of the population felt capable of preventing themselves from contracting Mpx but over half of that same sample did worry about developing severe Mpx symptoms

It was evident that students were not highly knowledgeable related to Mpx and did not believe themselves at risk for, or susceptible to, Mpx infection. However, the students did report infection with Mpx to be of serious consequence.

Social media was the most reported source of Mpx related information, when compared to sources such as peers and academic research.

RECOMMENDATIONS

After the completion of this research study, there a few recommendations for future practice which include:

- Shorten the length of the survey instrument to increase the response rate of participants
Adapt the survey to include a pre and post test option, to be given along with a brief educational intervention related to Mpx and its epidemiology
Broaden the target population to include other regional universities and colleges within the state and allow for comparison of general knowledge and trends
Broaden the target population to include the general public
Adapt the survey to include targeted questions related to stigma and the stigmatized beliefs surrounding Mpx infection

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

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