ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING MONKEYPOX VIRUS AMONG ALLIED HEALTH STUDENT

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ABSTRACT

OBJECTIVES

To evaluate the knowledge, attitude and practices regarding the monkeypox virus among undergraduate students of Allied health science institutes in Peshawar.

METHODOLOGY

This study follows a descriptive cross-sectional design involving a nonprobability convenient sampling technique of 384 Allied health science students. The survey comprised demographics and an assessment of knowledge, attitudes, and practices regarding the Monkeypox virus. Informed consent was obtained from all participants, and measures were taken to safeguard the confidentiality of study information. The collected data were statistically analyzed using the SPSS 22 version.

RESULTS

The study examined three key variables: Knowledge, Attitude, and Practice, regarding monkeypox among the participants. The findings showed that the knowledge related to the primary transmission mode was approximately 66.6%, demonstrating a lack of knowledge regarding monkeypox's primary transmission mode. The knowledge regarding the incubation period was around 52.08% of the participants exhibited insufficient knowledge regarding the incubation period of monkeypox. The attitude of the participant's concern about the risk of monkeypox was that the majority of the participants, approximately 83.33%, expressed varying levels of concern about the potential risk associated with monkeypox. Confidence in implementing preventive measures: Roughly 39.06% of the participants reported feeling confident in their ability to implement preventive measures effectively. Of the participants practice related to adherence to preventive measures was noted 49.47% reported consistent adherence to recommended preventive measures related to monkeypox.

CONCLUSION

The study highlighted significant knowledge gaps, specifically related to the primary mode of transmission and incubation period of monkeypox among participants. Despite the high concern, many participants lacked confidence in implementing preventive measures, and only around half consistently adhered to them. Targeted educational interventions and awareness campaigns are needed to improve knowledge, attitudes, and practices regarding monkeypox and enhance preparedness for preventing and managing infections.

KEYWORDS: *Monkeypox, Knowledge, Attitude, Practice, Allied*

INTRODUCTION

Monkeypox is a viral disease belonging to the family of orthopoxviruses, including the smallpox virus. It is primarily found in animals, particularly rodents and monkeys, but can be transmitted to humans, leading to disease outbreaks.[1] The first recorded case of monkeypox in humans occurred in 1970 in the Democratic Republic of the Congo, marking the beginning of documented cases in medical history.[2] Since then, monkeypox has been reported in various countries across different continents. The knowledge and attitudes regarding monkeypox have evolved over the years as scientists and healthcare professionals have conducted research and gained a better understanding of the virus.[3] Initially, Monkeypox was considered a rare disease, with sporadic outbreaks primarily limited to certain African regions. However, recent developments have raised concerns about its potential global impact.[4] The World Health Organization (WHO) declared monkeypox an "emerging danger of moderate public health concern" in 2022, following a

significant increase in reported cases worldwide.[5] Over 3,000 monkeypox illnesses were detected in over 50 countries across five regions within a few months.[6] Most confirmed cases have been reported in the WHO European Region, with the United Kingdom particularly affected.[7] The clinical presentation of monkeypox is similar to smallpox, with a rash that starts on the face and spreads outward to other body parts, including the oral mucosa, genitalia, palms, and soles.[8] The rash develops in stages over several weeks, beginning as macules, papules, vesicles, pustules, and ultimately crusts.[9] Other symptoms commonly associated with monkeypox include fever, lymphadenopathy, fatigue, headache, and myalgia.[10] The transmission of monkeypox occurs through direct contact with infected animals or humans. While person-to-person transmission is less efficient than smallpox, it can still happen, particularly during the early febrile stage of the illness.[11] The incubation period typically lasts around 12 days but can extend to 21 days.[12] Understanding the knowledge and attitudes surrounding monkeypox is crucial for effective prevention, early detection, and disease management. Healthcare professionals play a vital role in educating the public about the signs and symptoms of monkeypox, transmission routes, and preventive measures. Improved surveillance systems and international cooperation are also essential for monitoring and controlling the spread of the virus. Pakistan, categorized as a low-middle-income country, faces challenges associated with the inequitable distribution of limited resources. In 2021, the government allocated only 1.2 percent of its GDP towards healthcare, which falls significantly short of the World Health Organization's recommended 5 percent.[13] Additionally, the overall literacy rate in Pakistan is below 40 percent , and less than 30 percent of the population receives a university education.[14] Consequently, a lack of awareness and low literacy levels contribute to a limited understanding of basic health rights among the populace.

METHODOLOGY

This descriptive study was conducted over four months, from June to October 2022, and involved 384 students from various Allied Health Science institutes in Peshawar. The study utilized a non-probability convenient sampling method, and ethical approval was obtained from the institutional review committee. The head of the Medical Laboratory Technology department was informed about the study procedures and data usage for research purposes. The survey comprised demographics and an assessment of knowledge, attitudes, and practices regarding the Monkeypox virus. Based on previous research, a closed-ended questionnaire containing 28 questions related to knowledge, attitudes, and practices concerning the Monkeypox virus was developed. The inclusion criteria encompassed all undergraduate students from Allied Health institutes in Peshawar who voluntarily agreed to participate in the study. Specifically, students recently enrolled in the fourth and sixth semesters were included, while those who declined participation were excluded. The aim of the study was thoroughly explained to the participants, ensuring their involvement would be voluntary and anonymous. Informed consent was obtained from all participants, and measures were taken to safeguard the confidentiality of study information. The collected data were statistically analyzed using the SPSS 22 version.

RESULTS

The study included 384 Allied Health Sciences students, 264 male (68.8%) and 120 female (3.25%). During the research study of Allied health science students, 384 students participated in the survey. The students from the 4th semester are one hundred eighty (46%), and the 6th semester is two hundred four (53%). the residence ratio of Hostiles students is 142(35%) and that of Day scholar students is 242(60%).

Table 1: Knowledge, Attitudes, and Practices Regarding Monkeypox

Variables		F(%age)
Knowledge	Knowledge Gap: Primary mode of transmission	256(66.6%)
	Knowledge Gap: Incubation period	200(52.08%)
Attitude	Concern about the risk of Monkeypox	320(83.33%)
	Confidence in implementing preventive measures	150(39.06%)
Practice	Adherence to preventive measures	190(49.47%)

DISCUSSION

The current study aimed to determine knowledge, attitude and practice about the monkeypox virus among undergraduate students of Allied health institutes in Peshawar. Among the 384 sample sizes (68.8%) are male students and 31.3% are female students, 46.9% belong to the 4th semester, and 53.1% belong to the 6th semester. In a study conducted to assess the level of knowledge among general practitioners regarding Monkeypox (MPOX), the findings indicated that only 27% of general practitioners in Italy and 18.6% in Saudi Arabia demonstrated sound knowledge about the disease.[15] Similarly, another study conducted in Saudi Arabia revealed that 48% of the general population possessed sufficient knowledge about Monkeypox.[16] The present study findings are consistent with previous

research conducted among various groups, including Italian physicians, Jordanian and Kuwaiti healthcare workers, the general public in Saudi Arabia, Lebanon, and Iraq, and medical students from different countries.[17,18,19,20] These studies have consistently shown a lack of knowledge about Mpox disease among these populations. For example, a study conducted in Saudi Arabia revealed that the general public had poor overall knowledge about Mpox, with more than half of the respondents having low knowledge levels.[21] Similarly, an Italian study reported insufficient knowledge about Mpox and its prevention measures.[22] This low level of knowledge is concerning because public engagement is crucial for successfully implementing preventive strategies to control and treat potential outbreaks.[21] In contrast, when comparing the findings to the COVID-19 pandemic, a study conducted in Sindh, Pakistan, showed that people had good knowledge about symptoms, transmission routes, preventive measures, and the impact of COVID-19.[23] Regarding attitudes towards Mpox, most respondents in the present study had neutral attitudes (68.5%), while a smaller proportion had negative attitudes (11%). A significant portion of the participants (56%) expressed willingness to be vaccinated to prevent Mpox infection. This aligns with a survey conducted in the general population of the United States, where 46% of participants expressed willingness to be vaccinated against Mpox.[24] Similarly, a study among internal medicine residents in Indonesia found that 77.3% of respondents were willing to be vaccinated against Mpox.[25]

LIMITATIONS

It is important to note that these findings are based on the data collected from the sampled Allied Health Science students in Peshawar and may not be generalized to the entire population. However, they provide valuable insights into the knowledge, attitudes, and practices regarding monkeypox among this specific group. The results can be utilized to develop targeted educational interventions and awareness campaigns to improve knowledge levels, promote positive attitudes, and enhance adherence to preventive practices related to monkeypox.

CONCLUSIONS

In conclusion, the study revealed notable knowledge gaps among the participants, particularly regarding the primary mode of transmission and the incubation period of monkeypox. Despite a high level of concern about the risk of monkeypox, a substantial portion of the participants reported a lack of confidence in implementing preventive measures. Moreover, only about half of the participants consistently adhered to preventive measures. These findings underscore the need for targeted educational interventions and awareness campaigns to improve knowledge, attitudes, and practices related to monkeypox among the participants. By addressing the identified gaps, it is possible to enhance the overall understanding and preparedness of the participants in preventing and managing Monkeypox infections effectively.

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