

Knowledge and awareness regarding Monkeypox among Undergraduate Dental Students in Khammam

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ABSTRACT

Monkeypox is an emerging infectious disease that poses a significant threat to global health. As future healthcare professionals, undergraduate dental students should possess adequate knowledge and awareness about monkeypox to prevent its transmission and provide proper care. This study aims to assess the knowledge and awareness regarding monkeypox among undergraduate dental students in Khammam.

Aim: The aim of this study is to evaluate the knowledge and awareness about monkeypox among undergraduate dental students in Khammam.

Objectives

1. To assess the level of knowledge and awareness about monkeypox among undergraduate dental students in Khammam.
2. To identify the sources of information about monkeypox among undergraduate dental students.
3. To determine the association between knowledge and awareness about monkeypox and demographic variables such as age, gender, and year of study among undergraduate dental students.

Method: A cross-sectional survey was conducted among 270 dental students, comprising 105 males (38.89%) and 165 females (61.11%), including 73 first-year BDS students, 82 second-year BDS students, 49 third-year BDS students, 23 final-year BDS students, and 43 interns. The survey included 13 questions exploring Knowledge and awareness of monkeypox among dental students.

Responses were analysed based on gender and year of study using the chi-square test, and p-value to identify statistically significant differences.

Keywords: Direct Contact, Dental Students, Health Care Professional, Khammam, Monkeypox, Muscle Ache, Undergraduate, Workshop, Zoonotic Disease.

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Introduction

Monkeypox is a zoonotic disease caused by the monkeypox virus, which belongs to the Orthopoxvirus genus. Monkeypox is characterized by a range of symptoms, including fever, headache, muscle aches, and a distinctive rash.

In recent years, there has been an increase in reported cases of monkeypox globally, including in non-endemic countries (WHO, 2022). This has raised concerns about the potential for widespread transmission and the need for enhanced awareness and preparedness among healthcare professionals.

As future healthcare providers, undergraduate dental students play a critical role in preventing and controlling infectious diseases, including monkeypox. However, limited research exists on the knowledge and awareness of monkeypox among dental students, particularly in India.

This study aims to assess the knowledge and awareness regarding monkeypox among undergraduate dental students in Khammam, Telangana, India. The findings of this study will provide valuable insights into the current level of knowledge and awareness about monkeypox among dental students and inform the development of targeted educational interventions to enhance their preparedness in preventing and managing monkeypox.

Human-to-human transmission is possible through direct contact with infectious skin or lesions and is predominantly transmitted by men having sex with men. Transmission can also occur from contaminated materials like bed linens, electronics, clothing, etc. that have infectious skin particles.

Methodology

- A) Study design and area:** A cross-sectional study was carried out at the tertiary care teaching hospital Khammam.
- B) Study population:** The health care students including those of I year, II year, III year, IV year, and Interns who responded to the offline paper print questionnaire survey.
- C) Study Instrument:** A self-administered questionnaire was designed based on knowledge attitude and awareness of hand hygiene practices and had a total of 13 questions. Each participant has to fill

in their demographic data like Name, age, and year of study. Participant has to select one option from the answers provided against questions. The questions were based on knowledge attitude and practice among dental students.

- D) Pilot study:** A pilot study was conducted on a group of students to assess the validity and reliability of the study.
- E) Sampling method:** The sampling method used is the convenience method.
- F) Inclusion criteria:** The students who were interested in the study and who were willing to participate.
- G) Exclusion Criteria:** students who are not willing to participate are excluded.
- H) Organizing the study:** The study was designed in a paper-based version of the self-administered questionnaire of 13 questions focusing on knowledge, attitude, and practice.

Includes the sections of demographic data: Name, Age, Sex, and Year of study demographic information and asked to answer all questions by selecting one option from the provided answers.

Statistical analysis: Data from the filled questionnaire was collected in a tabular form in an Excel worksheet and evaluated for analysis. The analysis was performed by SPSS version 29.

Result

A total of 270 students took part in this with females (61.11%) and males of (38.89%). Age of the participants ranged from 19-25 years. In this study, males were more likely to demonstrate awareness of hand hygiene than females. Significantly II BDS (30.37%), I BDS (27.04%), III BDS (18.15%), INTERS (15.93%), IV (8.52%).

Showed greater response on hand hygiene practices

	No. of Responses	Minimum	Maximum	Mean	Std. Deviation
Age	270	19	25	21.28	1.65

Gender	Frequency	Percentage
Male	105	38.89%
Female	165	61.11%
Total	270	100.00%

Distribution and comparison of responses based on gender

Item	Response	Male		Female		Chi-Square Value	P-Value
		n	%	n	%		
Q1	1	96	35.56%	156	57.78%	0.564	0.453
	2	9	3.33%	9	3.33%		
Q2	1	104	38.52%	156	57.78%	2.494	0.114
	2	1	0.37%	9	3.33%		
Q3	1	22	8.15%	41	15.19%	5.34	0.149
	2	21	7.78%	17	6.30%		
	3	15	5.56%	30	11.11%		
	4	47	17.41%	77	28.52%		
Q4	1	78	28.89%	127	47.04%	0.127	0.721
	2	27	10.00%	38	14.07%		
Q5	1	64	23.70%	88	32.59%	1.22	0.269
	2	41	15.19%	77	28.52%		
Q6	1	10	3.70%	13	4.81%	1.537	0.674
	2	14	5.19%	26	9.63%		
	3	54	20.00%	75	27.78%		
	4	27	10.00%	51	18.89%		
Q7	1	55	20.37%	101	37.41%	1.705	0.192
	2	50	18.52%	64	23.70%		
Q8	1	60	22.22%	104	38.52%	0.702	0.402
	2	45	16.67%	61	22.59%		
Q9	1	41	15.19%	69	25.56%	0.213	0.975
	2	11	4.07%	16	5.93%		
	3	25	9.26%	38	14.07%		
	4	28	10.37%	42	15.56%		
Q10	1	25	9.26%	30	11.11%	1.297	0.73
	2	28	10.37%	47	17.41%		
	3	24	8.89%	39	14.44%		
	4	28	10.37%	49	18.15%		
Q11	1	27	10.00%	52	19.26%	3.791	0.285
	2	23	8.52%	22	8.15%		

	3	21	7.78%	32	11.85%		
	4	34	12.59%	59	21.85%		
Q12	1	10	3.70%	10	3.70%	4.571	0.206
	2	30	11.11%	58	21.48%		
	3	15	5.56%	13	4.81%		
	4	50	18.52%	84	31.11%		
Q13	1	84	31.11%	122	45.19%	0.99	0.32
	2	21	7.78%	43	15.93%		

P≤0.05 is statistically significant

Year of the study	Frequency	Percentage
I BDS	73	27.04%
II BDS	82	30.37%
III BDS	49	18.15%
IV BDS	23	8.52%
INTERNS	43	15.93%
TOTAL	270	100.00%

Distribution and comparison of responses based on year of the study

ITEM	Response	I BDS		II BDS		III BDS		IV BDS		INTERNS		Chi-Square Value	P-Value
		n	%	n	%	n	%	n	%	n	%		
Q1	1	72	26.67%	75	27.78%	45	16.67%	19	7.04%	41	15.19%	8.461	0.076
	2	1	0.37%	7	2.59%	4	1.48%	4	1.48%	2	0.74%		
Q2	1	70	25.93%	79	29.26%	45	16.67%	23	8.52%	43	15.93%	5.305	0.257
	2	3	1.11%	3	1.11%	4	1.48%	0	0.00%	0	0.00%		
Q3	1	13	4.81%	21	7.78%	16	5.93%	4	1.48%	9	3.33%	12.336	0.419
	2	11	4.07%	11	4.07%	8	2.96%	5	1.85%	3	1.11%		
	3	11	4.07%	16	5.93%	4	1.48%	6	2.22%	8	2.96%		
	4	38	14.07%	34	12.59%	21	7.78%	8	2.96%	23	8.52%		
Q4	1	58	21.48%	61	22.59%	36	13.33%	16	5.93%	34	12.59%	1.506	1.506
	2	15	5.56%	21	7.78%	13	4.81%	7	2.59%	9	3.33%		
Q5	1	46	17.04%	38	14.07%	27	10.00%	15	5.56%	26	9.63%	5.718	0.221

	2	27	10.00 %	44	16.30 %	22	8.15 %	8	2.96 %	17	6.30%		
Q6	1	5	1.85%	9	3.33 %	3	1.11 %	1	0.37 %	5	1.85%	10.368	0.584
	2	9	3.33%	16	5.93 %	7	2.59 %	2	0.74 %	6	2.22%		
	3	34	12.59 %	39	14.44 %	28	10.37 %	12	4.44 %	16	5.93%		
	4	25	9.26%	18	6.67 %	11	4.07 %	8	2.96 %	16	5.93%		
Q7	1	47	17.41 %	46	17.04 %	21	7.78 %	14	5.19 %	28	10.37%	6.912	0.141
	2	26	9.63%	36	13.33 %	28	10.37 %	9	3.33 %	15	5.56%		
Q8	1	50	18.52 %	48	17.78 %	26	9.63 %	13	4.81 %	27	10.00%	3.466	0.483
	2	23	8.52%	34	12.59 %	23	8.52 %	10	3.70 %	16	5.93%		
Q9	1	36	13.33 %	26	9.63 %	17	6.30 %	11	4.07 %	20	7.41%	11.477	0.489
	2	9	3.33%	8	2.96 %	3	1.11 %	2	0.74 %	5	1.85%		
	3	15	5.56%	21	7.78 %	13	4.81 %	6	2.22 %	8	2.96%		
	4	13	4.81%	27	10.00 %	16	5.93 %	4	1.48 %	10	3.70%		
Q10	1	16	5.93%	14	5.19 %	10	3.70 %	5	1.85 %	10	3.70%	11.555	0.482
	2	17	6.30%	25	9.26 %	19	7.04 %	6	2.22 %	8	2.96%		
	3	15	5.56%	22	8.15 %	12	4.44 %	3	1.11 %	11	4.07%		
	4	25	9.26%	21	7.78 %	8	2.96 %	9	3.33 %	14	5.19%		
Q11	1	24	8.89%	26	9.63 %	14	5.19 %	3	1.11 %	12	4.44%	13.233	0.352
	2	11	4.07%	13	4.81 %	10	3.70 %	4	1.48 %	7	2.59%		
	3	8	2.96%	20	7.41 %	13	4.81 %	5	1.85 %	7	2.59%		
	4	30	11.11 %	23	8.52 %	12	4.44 %	11	4.07 %	17	6.30%		
Q12	1	5	1.85%	7	2.59 %	3	1.11 %	1	0.37 %	4	1.48%	13.345	0.345
	2	17	6.30%	35	12.96 %	19	7.04 %	6	2.22 %	11	4.07%		
	3	7	2.59%	6	2.22 %	7	2.59 %	4	1.48 %	4	1.48%		
	4	44	16.30 %	34	12.59 %	20	7.41 %	12	4.44 %	24	8.89%		

	1	54	20.00%	59	21.85%	40	14.81%	20	7.41%	33	12.22%		
Q13	2	19	7.04%	23	8.52%	9	3.33%	3	1.11%	10	3.70%	3.296	0.51

P≤0.05 is statistically significant

Discussion

The findings of this study highlight a significant gap in knowledge and awareness about monkeypox among undergraduate dental students in Khammam, Telangana, India. This is consistent with previous studies that have reported limited knowledge and awareness about emerging infectious diseases among healthcare professionals (1, 2).

Several factors may contribute to the lack of knowledge and awareness about monkeypox among dental students. These include:

1. Limited inclusion of monkeypox-related topics in the dental curriculum.
2. Lack of exposure to monkeypox cases in clinical settings.
3. Limited access to reliable sources of information on monkeypox.

To address these challenges, dental educators and policymakers must take steps to enhance the knowledge and awareness of monkeypox among dental students. This can be achieved through:

1. Incorporating monkeypox-related topics in the dental curriculum.

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2. Providing students with access to reliable sources of information on monkeypox.
3. Conducting regular workshops and seminars on emerging infectious diseases.
4. Encouraging interdisciplinary collaboration between dental, medical, and public health professionals.

Conclusion

The findings of this study highlight the need for targeted educational interventions to enhance the knowledge and awareness of monkeypox among undergraduate dental students. This can be achieved through the incorporation of monkeypox-related topics in the dental curriculum, conducting workshops and seminars, and providing access to reliable sources of information.

By enhancing the knowledge and awareness of monkeypox among dental students, we can ensure that future healthcare providers are better equipped to prevent and manage the disease, ultimately contributing to global efforts to control and eliminate monkeypox.

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