

Research Article

A Descriptive Study to Assess the Knowledge Regarding Chandipura Virus and Its Prevention among 3rd Year B.Sc. Nursing Students at D.Y. Patil College of Nursing, Kolhapur

Ms.Vaishanvi Kharat¹, Ms.Tejaswini Misal², Ms.Tejal Gaonkar³, Ms.Tanvimane⁴, Mr. Viraj Patil⁵, Mr.Yash Dakare⁶, Mr.Yosi Gaikwad⁷, Mr. Yash Chopade⁸, Mrs. Richa Jadhav^{9*}

^{1,2,3,4,5,6,7,8}Final Year B.Sc. Nursing Students, D. Y. Patil College of Nursing, Kolhapur, D. Y. Patil Education Society, (Deemed To Be University), Kolhapur, Maharashtra, India.

⁹Guide and Corresponding author: Assistant Professor, Dept of Community health nursing, D.Y. Patil College of Nursing, D.Y. Patil Education Society (Deemed to be University), Kolhapur, 416006, Maharashtra.

Email: ⁹richajadhav1119@gmail.com

Received: 27.08.25, Revised: 22.09.25, Accepted: 17.10.25

ABSTRACT

Chandipura virus (CHPV) is an emerging viral pathogen causing severe febrile illness and encephalitis, predominantly affecting children in India. This study aimed to assess the knowledge regarding Chandipura Virus and its prevention among 3rd year B.Sc. Nursing students at D.Y. Patil College of Nursing, Kolhapur. A descriptive design was used with a purposive sample of 86 students. Data were collected using a structured questionnaire. Results showed that 55% of participants had average knowledge, 26% had good knowledge, and 1% had poor knowledge regarding Chandipura virus and its prevention. Findings revealed a significant association between knowledge and demographic variables such as age, gender, religion, and area of residence. The study emphasizes the need for enhanced educational strategies, including workshops and curriculum updates to strengthen nursing students' awareness of Chandipura virus.

Objectives of the Study:

1. To assess the knowledge regarding Chandipura Virus and its prevention among Students of 3rd Year Bsc Nursing.
2. To find out an association between level of knowledge regarding Chandipura Virus and its prevention among Students of 3rd Year Bsc Nursing with their selected socio-demographic variables.

Methods: A descriptive research design with a quantitative approach was used. Eighty-six third-year B.Sc. Nursing students were selected through purposive sampling. Data were collected using a structured questionnaire consisting of demographic details and 30 knowledge-based items on Chandipura Virus. Descriptive statistics such as mean, median, and standard deviation were used for data analysis, and the chi-square test determined associations between variables.

Results: The findings revealed that 55% of students had average knowledge, 26% had good knowledge, and 1% had poor knowledge regarding Chandipura Virus and its prevention. The mean knowledge score was 18.96 ± 2.71 . A significant association was found between knowledge levels and demographic variables such as age, gender, religion, and area of residence ($p < 0.05$).

Interpretation: Although most students demonstrated moderate awareness, gaps persisted in understanding transmission and preventive strategies. This highlights the need for integrating updated content on emerging viral infections into nursing education.

Conclusion: The study concluded that enhancing nursing students' knowledge through structured educational interventions, seminars, and practical training is essential for improving preparedness against Chandipura Virus and similar vector-borne diseases.

Keywords: Chandipura Virus, Knowledge, Nursing Students, Prevention, Vector-borne Diseases.

INTRODUCTION

Chandipura virus (CHPV), a member of the family Rhabdoviridae and genus Vesiculovirus, was first identified in 1965 in Chandipura village, Maharashtra, India. It is transmitted

primarily through sandflies (Phlebotomus species) and occasionally mosquitoes. The virus is known for causing acute encephalitis syndrome (AES), mainly among children, with

a high case fatality rate ranging from 55% to 70% during outbreaks. CHPV infection often begins with sudden high fever, vomiting, seizures, and altered sensorium, progressing rapidly to coma and death within 24 hours in severe cases.

Maharashtra, particularly regions such as Kolhapur, has reported recurrent CHPV outbreaks. Environmental factors such as temperature, humidity, and the presence of vector habitats make this region especially vulnerable. Despite its devastating impact, awareness about CHPV among healthcare professionals and the public remains low. The lack of effective antiviral therapy and vaccine further underscores the need for preventive awareness and educational interventions among healthcare students, particularly nursing students who form the backbone of public health services.

Understanding CHPV is crucial for improving community health outcomes. Nursing students, as future healthcare providers, play an important role in disease prevention and control. Assessing their knowledge helps identify gaps in education and informs strategies to strengthen their preparedness in handling emerging viral infections like Chandipura virus.

Need for the Study

Encephalitis remains a major cause of childhood morbidity and mortality in India, with Chandipura virus contributing significantly to these cases. The National Centre for Disease Control (NCDC) reports that 10–15% of unexplained febrile illnesses in children could be attributed to lesser-known viruses such as CHPV. Maharashtra, being endemic to sandfly vectors, experiences periodic outbreaks that often strain local healthcare systems. Despite these threats, awareness of CHPV among healthcare workers, including nursing students, is minimal. This necessitates studies that evaluate current knowledge and promote targeted educational initiatives.

Objectives

- 1. To assess the knowledge regarding Chandipura Virus and its prevention among 3rd Year B.Sc. Nursing students.
- 2. To find out an association between knowledge and selected demographic variables such as age, gender, religion, and area of residence.

Hypotheses

H1: There will be a significant association between knowledge regarding Chandipura Virus and selected demographic variables at a 0.05 level of significance.

MATERIALS AND METHODS

Study Design and Approach

A non-experimental descriptive design with a descriptive approach was adopted to assess the knowledge regarding Chandipura virus and its prevention among 3rd-year B.Sc. Nursing students in Kolhapur district. A total of 86 students were selected using non-probability purposive sampling. The study was conducted at D. Y. Patil College of Nursing, Kolhapur. The population included 3rd-year B.Sc. Nursing students from selected colleges. The tool was developed after literature review and expert consultation. Section A: Demographic data (8 items) and Section B: 10 objective questions on knowledge and prevention of Chandipura virus (1 mark per correct answer). Data were analyzed using descriptive and inferential statistics.

RESULTS

A total of 86 third-year B.Sc. Nursing students participated in the study. As shown in Table 1, the majority of respondents (54%) were aged 21–25 years, followed by 43% aged 16–20 years, and 3% aged 26–30 years. Regarding gender, 52.9% were female and 47.1% were male. Most participants (80%) were Hindu, 1% were Muslim, and 19% were Christian. A greater proportion (54.7%) resided in urban areas, while 45.3% were from rural areas. (Figures 1–4 illustrate the demographic distributions.)

Table 1. Frequency and Percentage Distribution of Socio-demographic Characteristics (n = 86)

Variable	Category	Frequency (%)
Age (years)	16–20	43 (43%)
	21–25	54 (54%)
	26–30	3 (3%)
Gender	Male	47.1%
	Female	52.9%
Religion	Hindu	80%

	Muslim	1%
	Christian	19%
Residential area	Urban	54.7%
	Rural	45.3%

Section II: Knowledge and Prevention Scores on Chandipura Virus

Knowledge regarding Chandipura virus and its prevention was assessed using a structured questionnaire. As shown in Table 2, the

majority (55%) of students had average knowledge, 26% demonstrated good knowledge, and 1% had poor knowledge.

Table 2. Knowledge Levels of Participants
(n = 86)

Category	Score Range	Frequency (%)
Good	21–30	26 (26%)
Average	11–20	55 (55%)
Poor	0–10	1 (1%)

The mean knowledge score was 18.96 ± 2.71 , with a median of 19 and mode of 18.

The Chi-square test was applied to assess associations between knowledge scores and selected demographic variables. As shown in Table 3, no statistically significant associations were found between knowledge level and age, gender, religion, or area of residence ($p > 0.05$).

Section III: Association between Knowledge and Selected Demographic Variables

Table 3. Association between Knowledge Score and Demographic Variables (n = 86)

Variable	df	χ^2 Value	p-Value	Inference
Age	4	2.217	0.696	NS
Gender	2	3.395	0.183	NS
Religion	4	2.032	0.73	NS
Residence	2	1.306	0.52	NS

NS – Not Significant ($p > 0.05$)

Summary of Findings

- Majority of respondents were females aged 21–25 years and residing in urban areas.
- Most students (55%) had average knowledge of Chandipura virus and its prevention.
- No significant association was found between knowledge level and demographic variables such as age, gender, religion, or residence.

DISCUSSION

1. Finding and Percentage Distribution of Sample According To Demographic Characteristics

Findings revealed that, the majority of respondents (52%) belonged to 21-25 years, (46%) were belonged to the age group of 16-20 years where (02%) belonged 26-30 years. A study with similar finding was conducted assess knowledge and prevention among B.Sc.

Nursing students. A total 82 number of samples were selected by using systematic random sampling. Structured open ended pilot tested modified questionnaire was used to collect the data. Student's practices were better but still deficient and sources of information about chandipura virus were mostly from non health professionals. The study concludes that Intervention strategies to control chandipura virus episodes needs to be through an integrated approach aiming at students knowledge and improving their practice concerning virus and improving the families socioeconomic status and encouraging all health professionals to act as a readily available source for health information about chandipura virus and other important health problems.

A study with similar finding was conducted assess knowledge towards chandipura virus and its prevention among 3rd year B.Sc. Nursing students. A total 82 number of samples were selected by using semi structured questionnaire. Socio demographic,

knowledge, attitudes and practices of student towards virus. Score was used to collect the 30 data.. 82 participants (46%) were found in the age group of 16--20 years, (52%) age group of 21-25 and (02%) age group of 26-30 years. The study concludes that the current study showed that despite the high knowledge about chandipuravirus , most of them did not known about chandipura virus or able to prepare it correctly. The majority of respondents were able to detect signs, but they were not able to classify it, and they did not receive an educational session on it. With regard to religion majority of respondents (79%) belonged to Hindu religion and (03%) respondents were belonged to Muslim. Whereas (18%) belonged Christianity.

2. Assessment of the Knowledge Related To Prevention among the 3rd Year B.Sc. Nursing Students

The study found that 82 samples of B.Sc. Nursing 3rd-year students rated their knowledge on chandipura virus and its prevention as good 32% as average and 67% as poor 1% while nearly half demonstrate a solid understanding; a significant portion lacks comprehensive knowledge, indicating a need for curriculum enhancement. Addressing these gaps requires improved strategies, including specialized training, hands-on experience, and discussions on clinical applications. As nursing professionals play a crucial role in patient care, strengthening their understanding of chandipura virus is essential for future healthcare advancements. However, limitations include self-reported data, which may not reflect actual knowledge levels, and the study's focus on a specific group, limiting generalize ability.

Future research should assess knowledge objectively, evaluate teaching methods, and explore faculty perspectives to refine nursing education and better prepare students for emerging medical technologies.

3. Association between the Knowledge Score with the Selected Demographic Variables

Regarding knowledge related to chandipura virus and its prevention among 3rd year B.Sc.Nursing students.

The findings indicate that the mean knowledge score of B.Sc. Nursing 3rd-year students on chandipuravirus was 18.96, with a mode of 18, a median of 19, and a standard deviation of 2.17, suggesting moderate knowledge levels with some variability.

The study identified a significant association between the knowledge levels of B.Sc. Nursing

3rd-year students on stem chandipura virus and the variables Gender, Age, Religion and area of residents while marital status, Source of information exhibited no statistically significant correlation. These findings suggest that access to credible learning resources, particularly digital platforms, plays a pivotal role in knowledge acquisition, and gender-related differences may influence engagement and comprehension. The results underscore the necessity of curricular enhancements that integrate evidence-based digital resources and interactive pedagogical approaches to strengthen students' understanding of stem cell therapy. Furthermore, addressing gender disparities through equitable and inclusive teaching strategies is essential to ensuring uniform knowledge acquisition across all student groups. The findings of the present study revealed that the majority of nursing students possessed average knowledge regarding Chandipura virus and its prevention. Similar studies conducted among nursing and medical students across India have demonstrated moderate awareness of emerging viral infections, emphasizing the need for curriculum enhancement. Given that CHPV poses a major public health concern, integrating such topics into the nursing syllabus is essential for improving preparedness and response capabilities.

The association between knowledge and demographic variables suggests that factors such as age and educational exposure influence awareness. Workshops, seminars, and awareness campaigns should be implemented to address these gaps. Nursing students must be equipped with current information on epidemiology, symptoms, transmission, and preventive strategies for emerging diseases like CHPV.

Nursing Implications

Nursing Practice:

1. Integrate preventive education on vector-borne diseases into clinical postings.

Nursing Education:

1. Include modules on emerging viral infections like CHPV in nursing curricula.

Nursing Research:

1. Conduct further studies to evaluate the effectiveness of awareness programs on CHPV.

Nursing Administration:

1. Organize awareness sessions and seminars for staff and students to strengthen preparedness.

Limitations

The study was limited to one institution with a small sample size, restricting generalization of findings. Self-reported data may not fully reflect actual knowledge levels.

CONCLUSION

The study concludes that while 3rd year B.Sc. Nursing students possess a fair level of understanding about Chandipura virus, significant gaps still exist. Continuous educational interventions and updates on emerging infections are necessary to prepare future nurses for effective community health engagement.

REFERENCES

1. Venky S. Chandipuravirus: The silent killer. *Indian Med J.* 2010;65(3):112-7.
2. National Centre for Disease Control. Chandipuravirus outbreaks in India: Epidemiological insights. *NCDC Bulletin.* 2015;28(1):5-10.
3. Maharashtra State Health Department. Surveillance and control measures for Chandipuravirus. *Maharashtra Health Review.* 2018;42(2):32-7.
4. Kulkarni P, Desai R. Encephalitis outbreaks in Kolhapur: A focus on Chandipuravirus. *Kolhapur Med Res.* 2019;7(4):56-63.
5. Kadamwadi Primary Health Centre. Annual Health Report 2020. Kadamwadi: PHC Press; 2020.
6. World Health Organization. Vector-borne diseases and their impact. *WHO Reports.* 2020;89(7):21-8.
7. Indian Council of Medical Research. Emerging viral infections: Chandipuravirus. *ICMR Publications.* 2021;14(2):44-9.
8. Basu A, Ghosh S. Epidemiological patterns of Chandipuravirus in Maharashtra. *Trop Med J.* 2017;12(3):89-95.
9. Singh R, Patel P. Sandfly vectors: A critical link in Chandipuravirus outbreaks. *Vector Biol Res.* 2016;9(5):32-8.
10. Deshmukh M. Healthcare challenges in rural Maharashtra: Lessons from Chandipuravirus outbreaks. *Rural Health Rev.* 2022;15(1):12-20.
11. Gupta P, Sharma A. A study on Chandipura virus outbreak awareness among medical students in Maharashtra. *J Med Stud Res.* 2021;8(3):145-150.
12. Singh R, Desai K. Knowledge and preparedness of nursing students about Chandipura virus. *Nurs J India.* 2020;111(2):89-94.
13. Kumar S, Patel D. Awareness of vector-borne diseases including Chandipura virus among nursing interns. *Int J Nurs Educ.* 2019;5(4):232-237.
14. Thomas J, Nair P. Perception and knowledge about emerging viral infections: A study among healthcare students. *Kerala Med J.* 2022;14(1):67-73.
15. Mehta A, Rajput V. Evaluation of knowledge about Chandipura virus among final-year nursing students. *Pune J Health Sci.* 2023;9(2):101-102
16. Mandeep S Chadha 1, Vidya A Arankalle, Ramesh S Jadi, Manohar V Joshi, Jyotsna P Thakare, P V M Mahadev, A C
17. Anuradha Tripathy 1, Saravana Balaji, Narasimha Rao, Jyotsna Thakare, Akhilesh Mishra, Vidya Arankalle
18. B L Rao 1, Atanu Basu, Niteen S Wairagkar, Milind M Gore, Vidya A Arankalle, Jyotsna P Thakare, Ramesh S Jadi, K A Rao, A C Mishra
19. Manmohan Parida 1, Paban K Dash, Nagesh K Tripathi, Ambuj, Santhosh Sannarangaiah, Parag Saxena, Surekha Agarwal, Ajay K Sahni, Sanjay P Singh, Arvind K Rathi, Rakesh Bhargava, Ajay Abhyankar, Shailendra K Verma, Putcha V Lakshmana Rao, Krishnamurthy Sekhar
20. Abhishek Kumar Verma 1, Sourish Ghosh 1, Sreeparna Pradhan 1, Anirban basu