

Assess the Knowledge regarding Snake Bite Management among Group-D Workers with the View to Develop an Information Booklet at Amity University Manesar, Gurugram, Haryana

Nachita¹, Arnav², Shivam³, Simpi Raheja⁴, Nishtha Thakur⁵

¹Amity University, Amity College of Nursing, Manesar Gurugram, Haryana, India
Email: sangwannachita64[at]gmail.com

²Amity University, Amity College of Nursing, Manesar Gurugram, Haryana, India
Email: arnavtushir11[at]gmail.com

³Amity University, Amity College of Nursing, Manesar Gurugram, Haryana, India
Email: bittushivam5[at]gmail.com

⁴Amity University, Amity College of Nursing, Manesar, Gurugram, Haryana, India
Email: simpi.raheja[at]yahoo.com

⁵Amity University, Amity College of Nursing, Manesar, Gurugram, Haryana, India
Email: nishthathakur2593[at]gmail.com

Abstract: Snakes are reptiles that have an elongated body, no legs or wings and are carnivorous in nature. These reptiles can scare the living soul of human beings as some species are venomous, but not all. Snakebite envenoming is a potentially life-threatening disease caused by toxins in the bite of a venomous snake. Snake bites can occur when humans or animals accidentally encounter a venomous snake or provoke it, leading to a defensive or predatory attack. Snake bite is the most common medical emergency in India, the large number of snake bites occur while the people walking at night or walking in the bare foot or in early morning along roadside, agricultural workers, children, and Group - D workers are the most affected. The present study is aimed to assess the knowledge regarding snake bite management among Group - D workers at Amity University Manesar, Gurugram, Haryana, with the view to develop an information booklet. In this research quantitative and explorative research design was used. 60 samples working at Amity University Gurugram, Haryana were selected by using purposive sampling technique. The result of the study showed that most of the Group - D workers 71.1% (43) had poor knowledge about snake bite management, whereas only 28.3% (17) Group D workers were having average knowledge about snake bite management & 0% (0) Group D workers had good knowledge about snake bite management. The knowledge score of Group - D workers was in the range of (5.63±1.34) mean ± SD and mean percentage came out to be 31.30%.

Keywords: Knowledge, Venomous snake, Snake bite, Group – D workers, Health education, Information booklet

1. Introduction

Snakes are reptiles that have an elongated body, no legs or wings and are carnivorous in nature. These reptiles can scare the living soul of human beings as some species are venomous, but not all. Snakes can survive on land and in water, depending upon the species [1]. A snake bite refers to the act of a snake sinking its teeth into a person or animal, typically resulting in the injection of venom into the victim's body. Snake bites can occur when humans or animals accidentally meet a venomous snake or provoke it, leading to a defensive or predatory attack [2]. Prompt medical attention is essential to assess and manage the effects of the snakebite, as some venomous snake bites can lead to severe complications or even be life-threatening if not treated promptly and appropriately. Snake bite is the most common medical emergency in India which we are encountering in everyone's day-to-day life [2]. Snake bites are a preventable health hazard. In an online portal of world population review 2023 shown the data of snake bite deaths by country 2023 India was on the first rank with 1,428,627,663 deaths in 2023 with snakebite following up the countries China, US,

Indonesia [3]. According to WHO report of June, 2017, around 81,000 to 138,000 people die each year, because of snake bites, and around three times as many amputations and other permanent disabilities are caused by snakebites annually [4]. Most of the deaths in the snake bite are due to time delay in reaching the hospital. Snake bite is an occupational hazard in Group-D workers, farmers, plantation workers and outdoor workers. Many bites occur while the people are walking at night or walking on bare foot or in early morning along roadside. Agricultural workers, children, and Group - D workers are the most affected [5].

2. Literature survey

Snakebite is an occupational hazard causing considerable morbidity and mortality worldwide, particularly so in tropical countries like India, Philippines, Indonesia and in some part of China.

According to WHO report of 2019, between 81,000 and 138,000 Deaths, 40,000 Amputation and Disability occur each year [6]. 70% of whom are males between the ages of

20 to 50 years. Along with the associated morbidity and mortality, snakebite leads to a significant financial burden on the victim, both by way of hospital bills and labor hours lost. Snakebite is also a cause for considerable psychological stress among survivors [7]. The Shramshakti Report, published in 1988, identified snakebite as an occupational hazard for tea plantation workers. More recently, in 2021, a study by Assam Agricultural University also enumerated venomous snakebite as one of the occupational hazards for tea workers, especially for women who harvest tea.[8].

A cross sectional study was conducted on the awareness, perception and first aid measures of snake bite among adult population Calicut, South India in 2021. The sample size was 156 and the knowledge assessed of people visiting the care centers and it has been found that 86% of people had poor knowledge about First aid measures regarding snakebite [9].

3. Method and Approach

The objective of the study was to assess the knowledge of snake bite management among Group D workers working at Amity University Manesar, Haryana with a view to develop an information booklet. The study was conducted at Amity University Manesar, Haryana. The research approach adopted for the study was Quantitative with exploratory survey design. The Group D workers who were working at Amity University Manesar, Haryana, were selected using purposive sampling technique. The tool for data collection comprised of 8 questions related to sociodemographic data and 18 structured questionnaires to assess the knowledge regarding snake bite management. Reliability of the tool was measured by using Cronbach's alpha coefficient of correlation. The reliability of structured questionnaire to assess knowledge regarding Snakebite management was 0.8. Hence, the tool was considered reliable.

4. Result and Discussion

The result of the study showed that most of the Group – D workers 71.1% (43) had poor knowledge about snake bite management, whereas only 28.3% (17) Group D workers were having average knowledge about snake bite management & 0% (0) Group D workers had good knowledge about snake bite management showed in Table (1) & Figure (1).

Table 1: Descriptive statistics of knowledge score regarding snakebite management (N=60)

Level of knowledge score	Score	Percentage (%)	Frequency (f)
Good	13-18	0.0%	0
Average	7-12	28.3%	17
Poor	0-6	71.7%	43

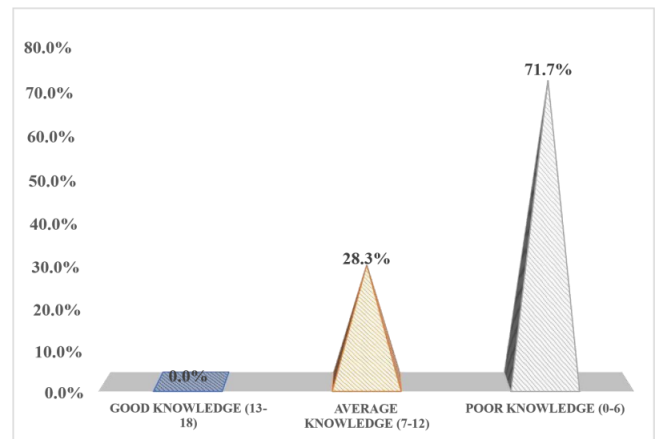


Figure 1: Percentage distribution of knowledge score regarding Snakebite management (N=60)

The data in table (2) & Figure (2) shows the Mean, Median, Standard Deviation, and Mean percentage of knowledge score of Group – D workers regarding snake bite management. Knowledge score was found to be as mean value was 5.63, median score was 6, maximum score was 8 and minimum score was 2, range of score was 6 and mean percentage was 31.30%.

Table 2: Descriptive statistics of level of knowledge (N=60)

Descriptive Statics	Knowledge Score
Mean	5.63
Median	6
SD	1.34
Maximum	8
Minimum	2
Range	6
Mean %	31.3

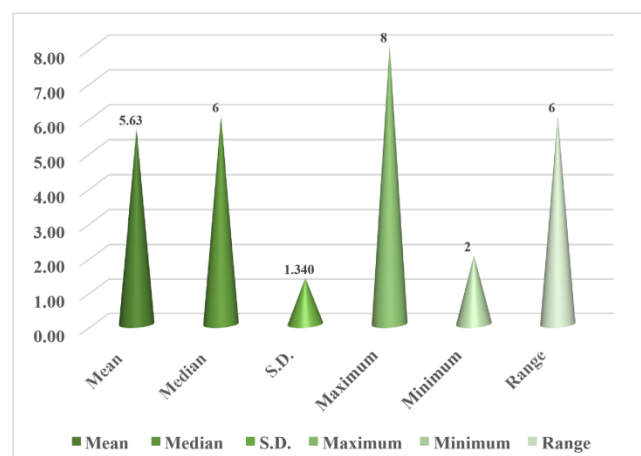


Figure 2: Descriptive statistics of level of knowledge of Group D workers (N=60)

The current findings after the assessment of knowledge on snake bite management among 60 Group - D workers of Amity University Manesar, Gurugram stated that 0.0% (0) of the Group D workers had good knowledge about snake bite management, 28.3% (17) of workers were average knowledge about snake bite management & 71.7% (43) Group D workers were having poor knowledge about snake bite management.

A cross sectional study was conducted on the awareness, perception and first aid measures of snake bite among adult

population Calicut, South India in 2021. The sample size was 156 and the knowledge assessed of people visiting the care centers and it has been found that 86% of people had poor knowledge about First aid measures regarding snakebite [8].

A study was conducted by Ruban David & Udhayanithi (2020) to assess the knowledge on prevention and management of snake bite among rural people at selected village. 100 samples of knowledge for snake bite were selected with non-probability purposive sampling technique. The result revealed that most of the people had moderate adequate knowledge 87(87%) and 10% of adequate knowledge and 3% had inadequate knowledge on prevention and management of snake bite in kalambakkam village among rural people [9].

5. Conclusion

The above study was conducted on 60 Group – D Workers from Amity University Manesar, Gurugram, Haryana to assess the knowledge regarding snake bite management. **The data result showed that the majority 71.7% (43) Group D workers had poor knowledge regarding snakebite management.** Data revealed that the mean and SD of knowledge is 5.63 ± 1.34 .

6. Future Scope

- 1) Further studies can be conducted on a large scale to provide a better picture of knowledge related to snake bite management.
- 2) There should be an in-service workshop and seminar to enhance the Group – D workers' knowledge related to snake bite management.
- 3) Similar study can be replicated using different teaching strategies viz., video films, information booklet, pamphlet etc.
- 4) A comparative study can be conducted on subjects from different University related to snake bite management can be utilized in other area of nursing practice.

References

- [1] Snake life cycle. Retrieved from <https://byjus.com/biology/snake-life-cycle/>.
- [2] Encyclopedia Britannica. (n.d.). Snake. In Form and Function. Retrieved from <https://www.britannica.com/animal/snake/Form-and-function>.
- [3] Snakebite envenoming. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/snakebite-envenoming>.
- [4] Regional action plan for prevention and control of snakebite envenoming in South-East Asia 2022-2030 published in New Delhi. Retrieved from Regional Action Plan for prevention and control of snakebite envenoming in South-East Asia 2022–2030 published in New Delhi (who.int).
- [5] Halesha B.R., Harshavardhan L., Lokesh A.J., Channaveerappa P.K., Venkatesh K.B. (2013). A study on the Clinico-Epidemiological profile and the outcome

of snake Bite victims in a tertiary care center in Southern India. Journal of Clinical & Diagnostic Research, 7(1), 122-126. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3576766/>.

- [6] Snakebite in India. Retrieved from <https://www.who.int/india/health-topics/snakebite>.
- [7] Jaideep C Menon, Joseph K Joseph, Romulus E Whitaker. (2017). Venomous Snake Bite in India - Why do 50,000 Indians Die Every Year. Journal Association Physician India, 65(8), 78-81. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/28799310/>
- [8] Bikash Kumar, Bhattacharya. (2023), Venomous snakebite, an occupational hazard for women tea workers. Retrieved from india.mongabay.com/2023/09/venomous-snakebites-an-occupational-hazard-for-women-tea-workers/?amp=1#
- [9] Thomas Beeson, H. Induja, Rajendran Greeshma, SB Bhosale. (2021). Awareness, Perceptions and First Aid Measures of Snakebite among Adult Population in Calicut, South India. International Journal of Medical Research & Health Sciences, 2319-5886, 10(4), 51-55. Retrieved from <https://www.ijmrhs.com/medical-research/crosssectional-study-on-the-awareness-perceptions-and-first-aid-measures-of-snakebite-among-adult-population-in-calicut-.pdf>.

Author Profile



Ms. Nachita is currently student of B.Sc. Nursing 8th Semester in Amity University Haryana



Mr. Arnav is currently student of B.Sc. Nursing 8th Semester in Amity University Haryana.



Mr. Shivam is currently student of B.Sc. Nursing 8th Semester in Amity University Haryana.



Ms. Simpi Raheja received the degree of B.Sc. Nursing & M.Sc. Nursing (OBG department) from Rufaida College of Nursing, New Delhi in year 2011 & 2016 respectively. Currently, she is working as AP-I in OBG department at Amity University Haryana.



Ms. Nishtha Thakur received the degree of B.Sc. Nursing from IGMC, Shimla, Himachal Pradesh in 2014. She received her degree of M.Sc. Nursing (Psychiatry Nursing) from Amity University Haryana, India in 2018. In August 2018 she joined Nightingale Institute of Nursing, Noida in the post of Nursing lecturer. She worked with Nightingale Institute of Nursing, Noida till November, 2022 and relieved from there on the post of Assistant Professor. In the month of November 2022, she joined Amity College of Nursing, Gurugram as an Assistant Professor-I (Mental Health Nursing Department) in ACON, AUH. Right now, she is working as AP-I in Mental Health Department at Amity University Haryana.

Ms. Nachita is currently student of B.Sc. Nursing 8th Semester in Amity University Haryana