

**“A STUDY TO ASSESS THE KNOWLEDGE REGARDING H3N2 AMONG THE PEOPLE RESIDING IN SELECTED URBAN AREAS OF PUNE CITY.”**

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**ABSTRACT**

A important respiratory disease that has significantly impacted global public health is the H3N2 virus, also known as influenza A subtype H3N2 (Lina et al., 2017). This virus has produced numerous epidemics and pandemics since it first appeared in the late 1960s, causing enormous morbidity and mortality. Effective prevention and control measures require a thorough understanding of the H3N2 virus' epidemiology, pathophysiology, and clinical effects. **Epidemiology:** The influenza a virus subtype H3N2 is a member of the Orthomyxoviridae family. Due to its enormous genetic heterogeneity, it can avoid host immunological responses and frequently experience antigenic drift. **The present study title:** “A study to assess the knowledge regarding H3N2 among people residing in selected urban areas of Pune City” **Material and method:** In this study we used quantitative research approach. An exploratory pre-test post-test design was selected as the investigation's study methodology. The non-probability convenient sampling technique was used. The sample consist of 200 among people in selected urban areas of Pune city who had fulfilled the inclusion criteria of the study in order to assess the knowledge regarding care of patients with stroke. The reliability of tool was done on 20 participants the value was **0.9758** and tool found reliable. **Result:** The study mentioned above reveals that according to the study mentioned above, 50% of samples had strong knowledge, 43% had average knowledge, and 7% had low knowledge. The average score was 10.22 with a 2.66 SD. **Conclusion:** It was concluded that As a result, this topic needs to be included in the courses on community health nursing and medical surgical nursing. Health care practitioners should place more emphasis on health education to raise awareness of H3N2 in the population.

**Keywords:** Assess, Knowledge, People

**INTRODUCTION**

A important respiratory disease that has significantly impacted global public health is the H3N2 virus, also known as influenza A subtype H3N2 (Lina et al., 2017). This virus has produced numerous epidemics and pandemics since it first appeared in the late 1960s, causing enormous morbidity and mortality. Effective prevention and control measures require a thorough understanding of the H3N2 virus' epidemiology, pathophysiology, and clinical effects. **Epidemiology:** The influenza a virus subtype H3N2 is a member of the Orthomyxoviridae family. Due to its enormous genetic heterogeneity, it can avoid host immunological responses and frequently experience antigenic drift.

Therefore, seasonal influenza vaccines need to be updated frequently to maintain their effectiveness against H3N2 strains that are currently circulating. The main routes of H3N2 virus spread include respiratory droplets and close contact with infected people. This method of transmission aids in the disease's quick global spread and generates multiple outbreaks and epidemics. In temperate locations, the yearly activity of H3N2 has a cyclic pattern, with maxima often occurring in the wintertime. Pathogenesis: H3N2 virus pathogenesis requires a nuanced interplay between viral components and host immunological responses. The H3N2 virus interacts to silica acid receptors on respiratory epithelial cells after entering the respiratory system, facilitating viral entrance and reproduction (Su et al., 2017). Continuous antigenic alterations to the viral hemagglutinin (HA) protein result in the emergence of novel strains that can subvert established immunity. An inflammatory response is brought on by the contact with the H3N2 virus with the immune system of humans and is signified by the release of pro-inflammatory cytokines. According to (Gordon et al. 2018), this inflammatory cascade helps to cause tissue damage and the clinical symptoms connected to H3N2 infection. The severity of H3N2 infection is also influenced by host characteristics such age, underlying medical problems, and immunological status. Clinical Impact: The effects of H3N2 infection can range from minor respiratory symptoms to life-threatening pneumonia and even death. The elderly, small children, pregnant women, and people with underlying medical issues are some of the population categories that are more vulnerable to severe illness consequences. (Centres for Disease Control and Prevention).

### **NEED OF THE STUDY**

Because of the H3N2 virus' major influence on worldwide health, research into the virus is of paramount relevance. H3N2 continues to pose a significant challenge despite decades of research and efforts to contain influenza outbreaks. For the purpose of creating efficient preventative, monitoring, and treatment programmes, it is essential to comprehend the need for additional research. Evolutionary dynamics and emerging threats: The H3N2 virus has extraordinary genetic diversity, which allows it to continuously change and evade host immunological reactions (Lina et al., 2017). The creation of efficient vaccines and antiviral treatments is severely hampered by this ongoing antigenic drift. As a result, research into the evolutionary dynamics of H3N2 is necessary to better surveillance and increase the precision of vaccine strain selection.<sup>8</sup>

Effectiveness of Vaccinations and Immunization Methods: Yearly influenza vaccinations are vital for decreasing the effects of H3N2 Outbreaks. Nevertheless, due to the virus' antigenic diversity, vaccine efficacy can vary from season to season. Optimizing immunization tactics can benefit from research into the variables affecting vaccination effectiveness, such as host immune response, virus properties, and population dynamics. Preparedness for pandemics: As seen by earlier pandemics like the 1968 Hong Kong flu pandemic, H3N2 has the capacity to create devastating pandemics.

Studying the genetic components, transmission dynamics, and virulence determinants of H3N2 is vital to enhancing pandemic preparation due to the continued risk of novel reassorting strains and the growing connection across global populations.

Public health Interventions: Putting into practice successful healthcare treatments requires a thorough understanding of the biology and H3N2 spreading patterns. This covers infection control methods, surveillance technologies, early outbreak identification, and quick outbreak response.

Decision-making can be guided and distribution of resources may be maximized by examining the success and effect of various interventions. Acute illness and consequences from H3N2 infection are more likely to impact vulnerable populations, especially the elderly, small children, and people with underlying medical disorders.

Researching the particular causes of susceptibility and figuring out focused preventative and treatment strategies can ease the strain on healthcare systems and enhance patient outcomes. In conclusion, research on the H3N2 virus is crucial to finding solutions to the persistent problems this influenza subtype causes. A better understanding of the disease's developmental dynamics, vaccine efficacy, pandemic preparedness, public health interventions, and impact on vulnerable populations can help to design prevention, control, and management techniques that are more effective.

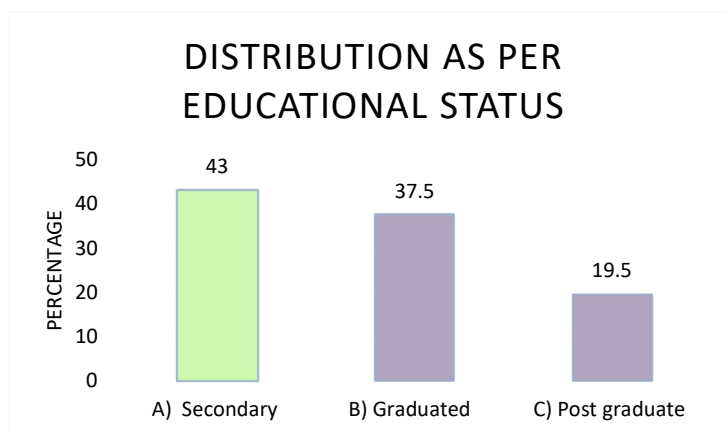
### AIM OF THE STUDY

The aim of the study was a study to assess the knowledge regarding H3N2 among people residing in selected urban areas of Pune City.

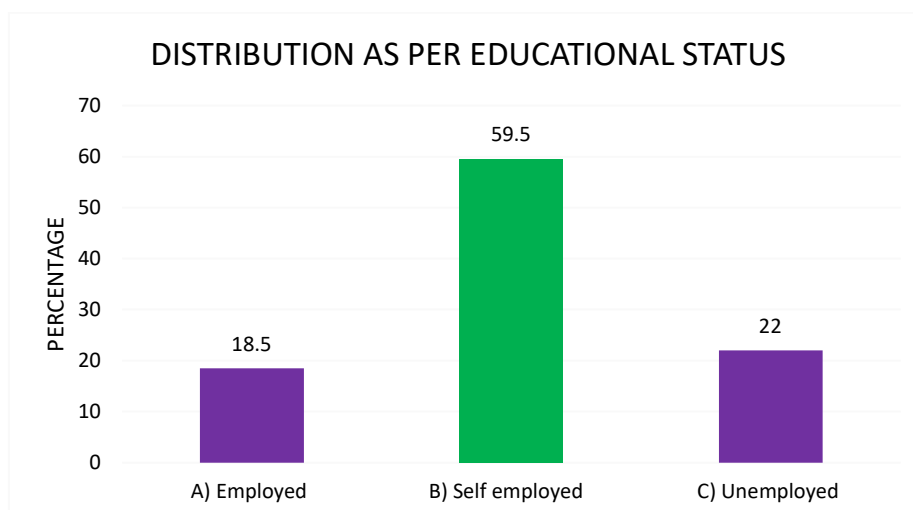
### RESEARCH METHODOLOGY

In this study we used quantitative research approach. An exploratory pre-test post-test design was selected as the investigation's study methodology. The non-probability convenient sampling technique was used. The sample consist of 200 among people in selected urban areas of Pune city who had fulfilled the inclusion criteria of the study in order to assess the knowledge regarding care of patients with stroke. The reliability of tool was done on 20 participants the value was 0.9758 and tool found reliable.

### RESULTS



**Figure 01:** shows that Majority 43% completed secondary education, 37.5% completed graduation and 19.5% completed post-graduation.



**Figure 02:** bar diagram shows that Majority 59.5% of the subject were self-employed, 22% of subject were unemployed and 18.5% of samples were employed

**1. Analysis of demographic data**

- The majority 29% of subject belongs to 18 to 25 years, 27.5% were from 36 to 46 years, 25.5% were from 26 to 35 years and 18% belongs to 46 to 60 years of age group.
- Majority 59.5% of the subject were self-employed, 22% of subject were unemployed and 18.5% of samples were employed.
- Majority 43% completed secondary education, 37.5% completed graduation and 19.5% completed post-graduation.

**2. Analysis of knowledge regarding H3N2 among people residing in selected areas of Pune City.**

Table no. 1: Mean, Standard deviation of knowledge regarding H3N2 among people residing in selected urban areas of Pune City.

Knowledge	Frequency	Percentage	Mean	SD
Poor	14	7	10.22	2.66
Average	86	43		
Good	100	50		

Table 1 shows that majority 50% of samples were having good knowledge, 43% having average knowledge and 7% poor knowledge. Mean score was 10.22 along with 2.66 SD.

The data presented in Table No. 01 reveals that the mean level of the data is 10.323, which means it falls on average score. It also shows that the Standard deviation is 2.7.

**3 Analysis of association of findings with selected demographic variables**

Table No. 2: Showing association between the knowledge score and the demographic variables

Demographic variables	Poor	Average	Good	D F	Chi Square Table	Chi square Calculated	P value	Remark

					Value			
<b>1) Age: -</b>								
A) 18 to 25 year.	25	29	4	6	12.59	6.85	0.33	NOT associated
B) 26 to 35 year.	22	29	0					
c] 36 to 46 year.	19	29	7					
d] 46 to 60 year.	20	13	3					
<b>2) Occupation: -</b>								
A) Employed	24	12	1	4	9.49	9.69	0.04	Associated
B) Self employed	47	62	10					
C) Unemployed	15	26	3					
<b>3) Educational status</b>								
A) Secondary	44	29	13	4	9.49	34.13	0.00001	Associated
B) Graduated	36	38	1					
C) Post graduate	6	33	0					

Table 4.3 show no any significant association with age. Occupation and educational status has significant association with knowledge.

**DISCUSSION**

The study is discussed with a similar descriptive study done by Nilesh on knowledge and practices related to swine flu in school students of Bhavnagar, Gujarat

The present study is done on 200 samples. A previous Study was done by Nilesh c at institute of Bhavnagar, In this study, the results demonstrate that 99% of students have an understanding of swine flu diseases; out of these, 77% are aware that the disease is caused by a virus, and 66% are aware of the Density of the virus, which is the H1N1 strain; around 84% have mentioned fever as a symptom of swine flu, while 76% have mentioned running nose, 62% have mentioned cough, and 49% have mentioned vomiting; 82% have knowledge of coughing and 11% of schoolchildren are aware that the swine flu can spread by hand shaking; the results showed that 19.5% of pupils were unaware, 57.5% were only averagely aware, and 23% were aware. Therefore, the results of the current study indicate that the majority of samples—50%—had strong knowledge, 43% had moderate knowledge, and 7% had bad knowledge. The average score was 10.22 with a 2.66 SD. It doesn't appear to be significantly correlated with age. Work and educational status have a strong correlation with knowledge. The survey mentioned above reveals that most 29% of the subjects are between the ages of 18 and 25; 27.5% are between the ages of 36 and 46; 25.5% are between the ages of 26 and 35; and 18% are between the ages of 46 and 60. 18.5% of samples were employed, 22% of subjects were unemployed, and 59.5% of subjects were self-employed. The majority (43%), 37.5%, and 19.5% of students finished their post-secondary education. Majority 29% of the subjects are between the ages of 18 and 25; 27.5% are between the ages of 36 and 46; 25.5% are between

the ages of 26 and 35; and 18% are between the ages of 46 and 60. Majority 18.5% of the samples were employed, 22% of the subject were jobless, and 59.5% of the subject were independent contractors. The majority (43%), 37.5%, and 19.5% of students finished their post-secondary education.

### **CONCLUSION**

Regarding H3N2, a statistically insignificant correlation between knowledge and demographic factors like age was discovered. Although most people had a good understanding of H3N2, the urban population lacked accurate knowledge of the virus. As a result, this topic needs to be included in the courses on community health nursing and medical surgical nursing. Health care practitioners should place more emphasis on health education to raise awareness of H3N2 in the population. Planning, organizing, staffing, directing, and supervising an organization is the focus of nursing administration. A clear picture of the current situation, knowledge gaps, attitudes, practices, and beliefs of diverse populations, etc., is provided by this research and its results, particularly for young health professionals. These studies assist the nursing administration in organizing a variety of educational workshops, seminars, training sessions, camps, and other events for local healthcare workers. Due to their ease in understanding the subject in-depth and their capacity as effective communicators in the community, this will raise awareness among nursing staff, health professionals, as well as community members. In India, nursing education is growing quickly, and there are nurses from our nation working all over the world as careers and educators. The health industry is using technology more and more. Nurses must be knowledgeable about the swine flu and the illness condition it causes. In today's society, health promotion and awareness are given more weight than causal factors since societal needs are constantly changing, hence nursing curricula must place more emphasis on preventative factors. The study's findings can be used by the nursing instructor to provide the students with educational examples that will help them determine their own values and feeling of responsibility.

### **CONFLICT OF INTEREST**

We, researchers, understand that conflict of interest refers to situations in which financial or other personal considerations may compromise our judgment in evaluating, conducting, or reporting research. We hereby declare that we do not have any personal conflict of interest that may arise from our application and submission of our research proposal.

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