



# A Study to Assess the Effect of Structured Teaching Programme on Knowledge Regarding Post-Covid Syndrome Among Fourth Year B.Sc. Nursing Students at Selected Nursing Colleges of Pathanamthitta District.

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## ABSTRACT

COVID-19 is an infectious disease caused by the SARSCOV-2 virus. Post-COVID syndrome are signs and symptoms that develop during or after an infection consistent with COVID-19, continuing for more than 12 Weeks. The present study aimed to assess the effect of the Structured Teaching Programme (STP) on knowledge regarding post-syndrome among fourth-year B.Sc. Nursing students at a selected nursing college of Pathanamthitta district. The study's objectives were to determine the effect of a structured teaching program on knowledge regarding post-COVID syndrome by comparing the pre-test and post-test knowledge scores and to find the association between pre-test knowledge scores and selected demographic variables. Non- non-probability convenient sampling technique was used to select the 30 samples and a pre-experimental one-group pretest and post-test design was used. The conceptual framework of this study is based on modified general system theory. During the pretest, the investigator assesses post-COVID syndrome knowledge with a questionnaire. On the same day, the investigator administered a structured teaching program regarding post-syndrome. After 7 days a post-test was conducted using a knowledge questionnaire. The analysis was performed by using descriptive and inferential statistics to assess the effectiveness and association with selected demographic variables. During the pretest 16.6% had poor knowledge, 83.4% had average knowledge and no one had good knowledge regarding post covid syndrome. After the Structured Teaching Programme (STP), 46.7% of the sample attained average knowledge, 53.3% achieved good knowledge and none of them had poor knowledge regarding post-syndrome. The effect of the Structured Teaching Programme was calculated by paired t-test and the value was 9.85. which is greater than the table value. The mean difference was 6.67. The research hypothesis was accepted at a 0.05 level of significance. The association between pretest knowledge and selected demographic variables was calculated by chi-square and shows a significant association between fourth-year B.Sc. nursing students' pretest knowledge score and history and previous knowledge regarding post-COVID syndrome at a degree of freedom 1. The study concluded that a structured teaching program is one of the effective teaching methods to prevent post-syndrome.

Keywords: Effect; Structured Teaching Program; knowledge; post covid syndrome

## INTRODUCTION

### BACKGROUND AND NEED OF THE STUDY

COVID-19 is an infectious disease caused by the SARS-CoV-2 virus. According to the World Health Organization (WHO), approximately 10% - 20% of people experience a variety of mild and long-term effects after they recover from their initial illness. These mild and long-term effects are called post-COVID syndrome. Post-COVID syndrome develops during or after an infection consistent with COVID-19, continuing for more than 12 weeks. Symptoms in the mildest forms include dry cough, fatigue, and fever. On the other hand, in the most severe forms, the symptoms can progress to respiratory failure requiring invasive mechanical ventilation<sup>1</sup>.

An article published in the Times of India "Despite big dip in cases, post-COVID woes persist in Kerala. The article states that it has been over a month since the COVID cases started declining noticeably in the state in the third wave. Though the numbers have come down, post-COVID issues are still making many ill"<sup>2</sup>.

According to Mathew George, a general Physician based in Alappuzha, "These persistent symptoms in recovered patients occur irrespective of age but are seen mostly affecting youngsters. "Youngsters are the most affected in the third wave. In certain cases, patients develop symptoms after two weeks of infection. They will not have any symptoms during the period of infection but only during the recuperating time" Long-term consequences after covid 19 infections are becoming an important burden to individuals, societies, and the healthcare system<sup>2</sup>.

Nurses are one of the vulnerable groups among healthcare teams, and the chance of exposure is high due to a lack of knowledge about the early identification of symptoms and prevention of post-COVID syndrome. So, it is necessary to increase awareness regarding preventing and managing post-COVID syndrome among 4th-year B.Sc. nursing students, as they are future nurses.

### STATEMENT OF THE PROBLEM

“A study to assess the effect of Structured Teaching Programme on knowledge regarding post COVID syndrome among Fourth-year B.Sc. Nursing students at selected nursing colleges of Pathanamthitta district.”

### OBJECTIVES

- Determine the effect of a structured teaching program on knowledge regarding post-syndrome by comparing the pre-test and post-test knowledge score
- To find out the association between pre-test knowledge score with selected demographic variables

### OPERATIONAL DEFINITION

**Post-Covid Syndrome:** In this study post-COVID syndrome is defined as signs and symptoms that develop after an infection consistent with COVID-19, continuing for more than 12 weeks.

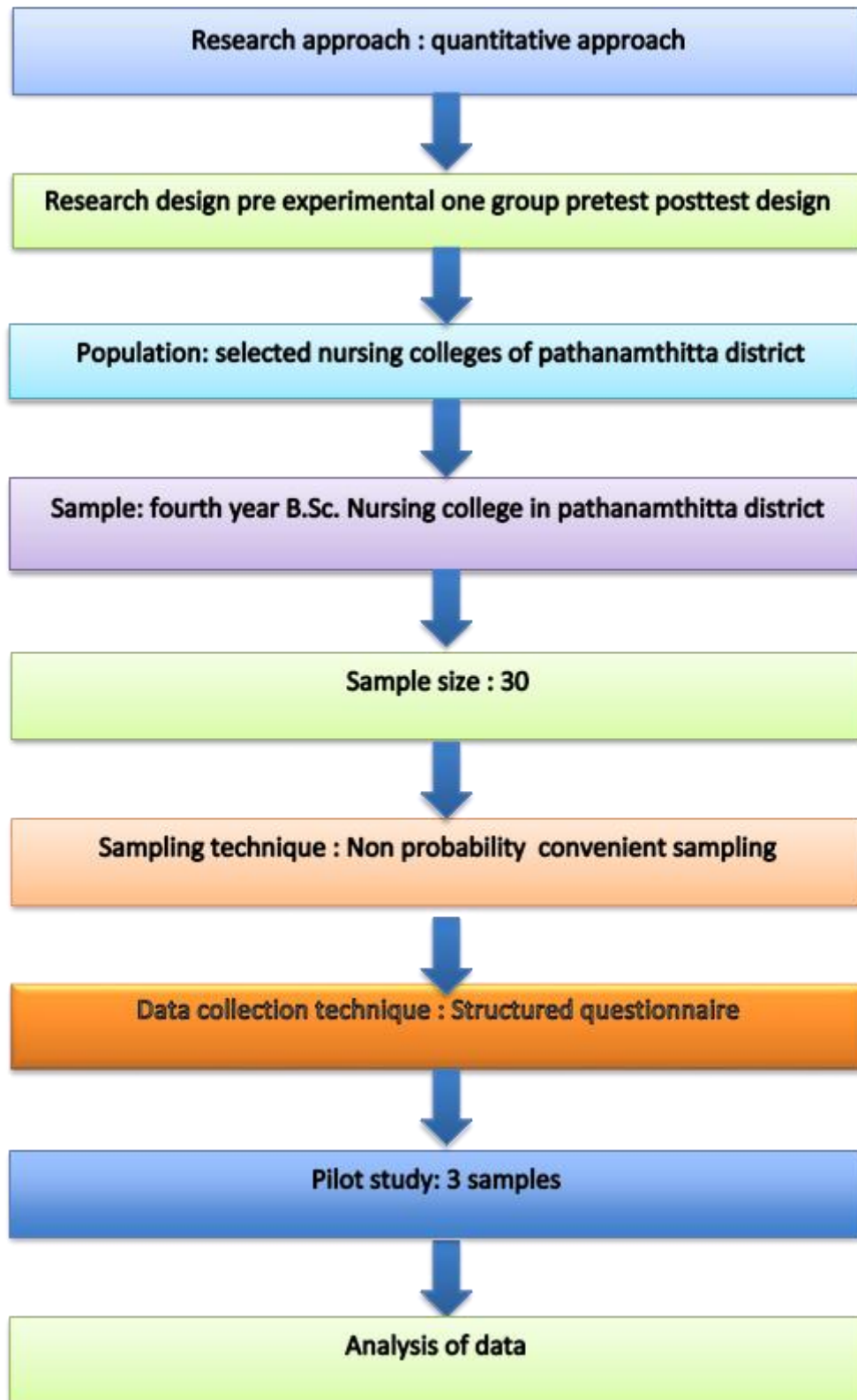
**Structured Teaching Programme:** A structured teaching program is a systematically organized instructional program using a PowerPoint presentation for 30 minutes to provide information about the Definition, Etiology, Clinical Manifestation, Diagnosis, Prevention, And Management of post-syndrome.

**Knowledge:** This study refers to information regarding the Definition, Etiology, Clinical Manifestation, Diagnosis, Prevention, And Management of post-COVID syndrome.

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### HYPOTHESIS

- ▶ **Null hypothesis (H<sub>0</sub>):** There is no significant difference between the pretest and post-test knowledge scores regarding post-syndrome among the 4<sup>th</sup> year B.Sc. nursing students before and after STP.
- ▶ **Alternative hypothesis(H<sub>1</sub>):** There is a significant difference between the pretest and post-test knowledge scores regarding post-syndrome among the 4<sup>th</sup> year B.Sc. nursing students before and after STP.
- ▶ **Association hypothesis:** There is a significant association between pretest knowledge score with selected demographic variables (such as age, gender, socioeconomic status, history of COVID-19, and previous knowledge) among fourth-year BSc nursing students.

**Inclusion criteria**

- Only Fourth Year B.Sc. Nursing Students are included
- Who is studying at Pathanamthitta districts
- Subjects who are available during the time of data collection.

**Exclusion criteria**

- Students who do not provide consent from the study
- Those who are sick and quarantine
- Fourth Year B.Sc. Nursing Students.
- Subjects who are available during the time of data collection.

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## TOOL FOR DATA ANALYSIS

A tool is a device that helps to collect data related to a study. The tool used for the study is a structured knowledge questionnaire.

### TOOL 1

**Section A:** Baseline Performa

**Section B:** Structured knowledge questionnaire regarding post-syndrome

#### Development of tool

Baseline proforma is related to the selected variables, it consists of age, gender, religion, socioeconomic status of a family, type of family, previous knowledge regarding the post-COVID syndrome, and any history of COVID-19. The knowledge questionnaire consists of 25 multiple-choice questionnaires which are based on knowledge, clinical features, diagnosis, and management of post-syndrome. Participants are instructed to put a tick mark in the box for the correct answer. The score of each correct answer is 1 and the incorrect is 0. The maximum possible score isn25. The knowledge is graded according to the score obtained.

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## ANALYSIS AND INTERPRETATION

### Section 1: Sample characteristics

**Table 1 (a):** Frequency and percentage distribution of subjects based on age, religion, and gender (N=30)

Gender	Frequency	Percentage
Male	5	16.7%
Female	25	83.3%

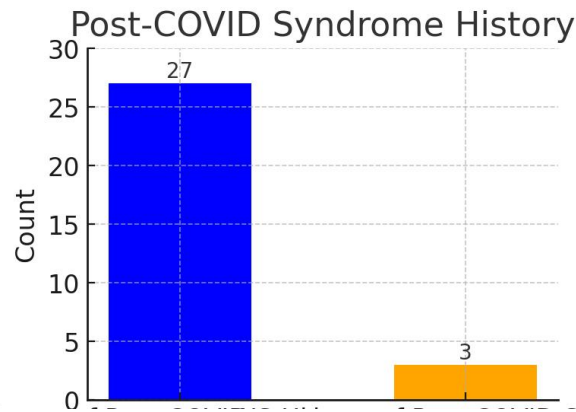
Religion	Frequency	Percentage
Hindu	4	13.4%
Christian	26	86.6%

Age of students	Frequency	Percentage
19-20	0	0
20-22	27	90
ABOVE 22	3	10

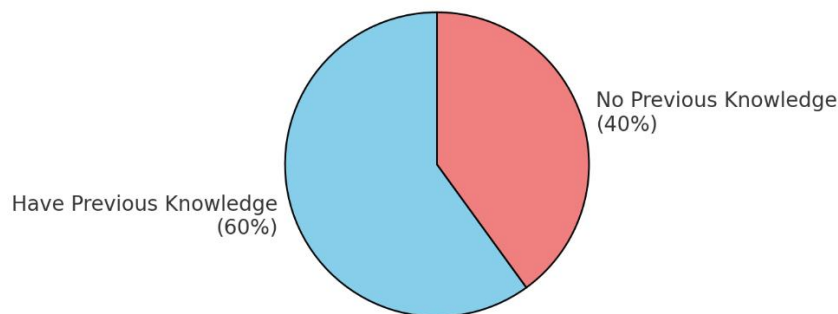
**Figure 3**

**Distribution of fourth-year B.Sc Nursing students according to the history of post-COVID syndrome.**



From the above figure, it is evident that out of 30 samples, 27 of them (90%) have a history and 3 of them (10%) do not have a past history of post-syndrome

### Distribution of Students by Previous Knowledge of Post-COVID Syndrome



## SECTION 2: EFFECT OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING POST-COVID SYNDROME AMONG FOURTH YEAR B.Sc. NURSING STUDENTS.

Table 2.1

Effect of teaching program on post-COVID syndrome knowledge score.

	MEAN	SD	t VALUE	P VALUE
Pre-test	13.23	2.97		0.05
Post-test	19.9	2.12	9.85	

Table 2.1 shows that there is a significant increase in the knowledge level of participants regarding post-syndrome.

Table 3: Frequency and distribution of students on pre-test and post-test scores.

(N = 30)

Knowledge level	Frequency	Percentage	Frequency	Percentage
Poor	5	16.6%	0	0%
Average	25	83.4%	14	46.7%
Good	0	0%	16	53.3%

## Section 3: ASSOCIATION BETWEEN PRETEST KNOWLEDGE AND SELECTED DEMOGRAPHIC VARIABLES OF FOURTH YEAR B.SC NURSING STUDENTS.

Table 3.1

Association of pre-test knowledge score and gender

(n=30)

Variables	Poor	Average/Good	chi-square value
<b>Gender</b>			
Male	1	4	0.096
Female	4	21	

Table 3.1 shows that the calculated value of chi-square at the degree of freedom 1 was less than the table value (3.84) so there was no association between pretest knowledge of fourth-year B.Sc nursing students with gender

**Table 3.2**

**Association of pre-test knowledge score and history of COVID**

Variables	Poor	Average/Good	chi-square value
<b>History of covid</b>			
yes	5	22	*22.6
No	0	3	

\*Significant at 0.05 level

Table 3.2 shows that there was a significant association between the pretest knowledge score and history of COVID-19. The calculated chi-square value at the degree of freedom 1 is 22.6, more than the table value of 3.84.

**Table 3.3**

**Association of pre-test knowledge score and previous knowledge regarding post-Covid syndrome**

(n= 30)

Variables	Poor	Average/Good	chi-square value
<b>Previous knowledge</b>			
yes	3	15	*11.2
No	2	10	

Significant at 0.05 level

**Table 3.3** shows that there was a significant association between the pretest knowledge score and previous knowledge regarding post-COVID syndrome. The calculated chi-square value at the degree of freedom 1 is 11.2 which is more than the table value of 3.84.

## RESULT AND DISCUSSION

### Section 1: Sample Characteristics

Out of 30 samples, the majority of the samples 27 (90%) belong to the age group of 20 - 22, the majority of the samples were females 25 (83.3%). Most of the samples were Christians 26 (86.6). All of the samples belong to middle-class socio-economic status. The majority of the samples had a history of covid 27 (90%). More than half of the samples had previous knowledge regarding post-syndrome.

This was supported by a descriptive study conducted on the topic "Demographic Characteristics and Knowledge Levels of Nursing Students on Post-COVID Syndrome" among 100 nursing students in 2022 the study reported that the majority of participants (85%) were aged 20–22 years, with a predominance of females (82%). Socioeconomic data indicated that most participants (88%) belonged to middle-class families. Approximately 92% had either experienced COVID-19 or had a family member infected, and 65% reported some level of prior knowledge regarding post-COVID syndrome<sup>3</sup>.

**Section: 2** Effect of Structured Teaching Programme regarding post-COVID syndrome among fourth year B.Sc. Nursing students.

In the pretest, 16.6 % of the samples had poor knowledge, and 83.4% had average knowledge regarding post-syndrome. In the post-test, 46.7% had average knowledge and 53.3% had good knowledge. The mean post-test knowledge on post-syndrome was 19.9% which was more than the pretest knowledge score of 13.23%. The mean difference was 6.67. The calculated t-value was 9.85.

A quasi-experimental study was conducted among final-year nursing students to evaluate the impact of an STP on knowledge related to post-COVID syndrome in 2022

A pre-test and post-test design was employed, with a sample of 50 students. A paired t-test revealed a significant improvement in knowledge after the STP (t-value = 9.45,  $p < 0.001$ ).

The study concluded that an STP is an effective educational intervention for improving nursing students' knowledge of emerging healthcare topics like post-COVID syndrome<sup>4</sup>.

### **.Section 3: Association between the knowledge and selected demographic variables of fourth-year B.Sc. nursing student**

shows that the calculated value of chi-square at the degree of freedom 1 was less than the table value (3.84) so there was no association between pre-test knowledge of fourth-year B.Sc nursing students with gender. there was a significant association between the pretest knowledge score and history of COVID-19. The calculated chi-square value at the degree of freedom 1 is 22.6 which is more than the table value 3.84 that there was a significant association between the pretest knowledge score and previous knowledge regarding post-COVID syndrome. The calculated chi-square value at the degree of freedom 1 is 11.2 which is more than the table value of 3.84. This finding supported a cross-sectional study that analyzed the influence of prior COVID-19 infection on the knowledge and awareness of post-COVID syndrome among medical and nursing students. Students with a history of COVID-19 infection scored significantly higher in knowledge assessments compared to those without a prior history ( $p < 0.05$ ). The study concluded that personal experiences with COVID-19 contributed to a better understanding of the disease and its long-term effects<sup>5</sup>.

### **Limitations**

- The study is limited to 30 samples.
- conducted in one institution the results may not reflect the knowledge levels of nursing students in other settings or regions.

### **Delimitations of the Study**

- The study is limited to fourth-year B.Sc. Nursing students, may not represent other nursing students or healthcare professionals.
- The study is conducted in a specific nursing college
- The data collection is restricted to a defined time frame, which may not account for changes in knowledge or awareness over time

### **Recommendations.**

- A similar study can be conducted in any community setting
- It would be interesting to continue the primary study or replicate it, to examine if the hypothesis for this secondary analysis would be supported.
- The study can be conducted in a larger sample to generalize the findings.
- A prospective study can be conducted to assess the knowledge regarding post-COVID syndrome.
- An experimental study can be conducted with a control and experiment group.

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