

# A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding COVID-19 in Children among BSc Nursing Students in a Selected Nursing College around Virudhunagar

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## ABSTRACT

**Background:** All people need their formative years because they lay the foundation for their personalities and emotional resilience throughout this time. All children, regardless of age or nationality, are being impacted by the coronavirus disease-2019 (COVID-19) global problem. The impacts may be lifelong for some young people. In this difficult moment, let's all pledge to do everything in our power to mitigate COVID-19's effects on the children, who most urgently require protection.

**Objectives:** To evaluate the effectiveness of a structured teaching program in terms of improvement in knowledge regarding COVID-19 in children among BSc Nursing students.

**Materials and methods:** It was a preliminary experiment carried out at Virudhunagar's V. V. Vanniaperumal Nursing College for female students. The tool, a self-structured knowledge questionnaire, was used to evaluate the success of structured education programs as well as the degree of knowledge. This study employed a pre-experimental research approach and purposive sampling.

**Results:** It was discovered that the acquired "t" value of 14.98 is statistically significant at the 0.05 level and that the obtained mean posttest knowledge score of 20.78 is greater than the obtained mean pretest knowledge score of 15.38. The study's findings suggest that the organized training program was successful in enhancing BSc nursing students' knowledge of COVID-19 in children.

**Conclusion:** All youngsters receive health maintenance during the COVID-19 epidemic from healthcare professionals. The study indicated the need for BSc Nursing students to get efficient in-service training on COVID-19 in children.

**Keywords:** BSc Nursing students, Coronavirus disease-2019 in children, Structured Teaching Program, Transmission of COVID-19.

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"Children are a gift from the lord; they are a reward from him"

–Psalm

## INTRODUCTION

The rise in pneumonia cases in Wuhan is being attributed to the identification of a brand-new coronavirus towards the tail end of 2019. An epidemic spread around the world when a city in the Hubei province of China saw unprecedented expansion. The greatest evidence for coronavirus disease-2019 (COVID-19) indicates that severe acute respiratory syndrome (SARS-CoV2) has a zoonotic source that is closely related to bat origin.<sup>1</sup>

In February 2020, the World Health Organization classified the coronavirus sickness as a disease. COVID-19 is brought on by a virus known as SARS-CoV2. COVID-19 was declared a pandemic by the WHO on March 11, 2020. It has spread to more than 115 countries globally since the World Health Organization declared it to be a pandemic. On January 30, 2020, Kerala, India, witnessed the nation's first COVID-19 case.<sup>2</sup>

Even though infants and adults both exhibit the symptoms of COVID-19, children typically only experience mild, cold-like symptoms. The majority of kids get better in one to two weeks. Children are said to have a better prognosis and pediatric coronavirus disease (COVID-19) in children is considered to be comparatively mild compared to adult cases. Fever and cough are among the clinical signs of COVID-19 in children, although

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many of them appear to be asymptomatic and could still help spread the infection.<sup>3</sup> Children and young adults are affected less severely than the elderly. Angiotensin-converting enzyme 2 (ACE2) and severe acute respiratory syndrome are linked to variations in the immune system and cellular receptor activity for the coronavirus.

Additionally, children who already have underlying conditions like obesity, diabetes, or asthma may be more susceptible to developing major illnesses from COVID-19.<sup>4</sup> Children with congenital heart issues, genetic disorders, and disorders of the brain

system or metabolism may also be at a higher risk of developing serious illnesses from COVID-19.

There are several symptoms that could be present, including fever and chills, runny or stuffy nose, cough, sore throat, shortness of breath, difficulty breathing, exhaustion, headache, muscle or body pains, nausea or vomiting, diarrhea, poor feeding or poor appetite, loss of taste or smell, and stomach pain.<sup>5</sup>

Remdesivir treatment for COVID-19 still mostly focuses on symptom control and complication avoidance. During the early COVID-19 pandemic, community mitigation strategies including shelter-in-place orders led to a decrease in outpatient pediatric visits and a reduction in the number of vaccine doses given, putting kids at risk for diseases that can be prevented by vaccination.<sup>6</sup> When determining whether a child may require inpatient care for COVID-19, pediatric healthcare practitioners should take into account the child's clinical presentation, need for supportive care, underlying medical issues, and the ability of caregivers to care for the child at home.

### Need for Study

Different people are affected by COVID-19 in various ways. Any age can contract the virus and spread it to others. We are still learning about how COVID-19 affects women and children because it is a relatively novel virus. In youngsters, COVID-19 infection is typically very mild, meaning they don't exhibit any signs of the virus at all, according to data from all around the world and India. Only about 1–2 percent of children with symptoms require treatment in an intensive care unit.<sup>7</sup> This amount is far lower than the proportion of adults who need critical care. Only a small percentage of youngsters may experience severe illness.

Children who already have a serious condition such as heart disease, renal disease, liver disease, or cancer may be more susceptible to developing a severe illness from COVID-19. Children who are obese, have diabetes, asthma, chronic obstructive pulmonary disease, sickle cell disease, or are using immune suppressants may also be more susceptible to developing severe COVID-19 sickness.

After the disease's pandemic status was announced, the incidence of COVID-19 among children increased. There were found to be 2.1% of affected people who were under the age of 18 and no fatalities among children under the age of 9. Only 4.4% of these children in India were found to have a severe illness. Children (0–10) and teenagers (11–20) had the lowest COVID-19 prevalence, which was higher in individuals between the ages of 21 and 30. The COVID-19 virus has been found in 64,193 children under the age of 19 who have been treated in India. In Tamil Nadu, fewer than 5% of the pediatric population has tested positive for COVID-19.<sup>8</sup>

One thing is certain as the COVID-19 pandemic spreads throughout the world and in India: the present outbreak will have a significant impact on children's mental wellbeing in addition to their health and economic status.

### Statement of the Problem

A study to assess the Effectiveness of a Structured Teaching Program on knowledge regarding COVID-19 in children among BSc Nursing students in selected Nursing Colleges around Virudhunagar.

### Objectives

- To evaluate BSc Nursing students' prior knowledge of COVID-19 in children.

- To evaluate the posttest knowledge of BSc Nursing students on COVID-19 in children.
- To assess the efficiency of a structured teaching program in terms of an improvement in students' knowledge of COVID-19 in youngsters.
- To determine the relationship between the COVID-19 pretest knowledge of BSc Nursing students and particular demographic factors.

### Hypothesis

*H1:* BSc Nursing students' mean posttest knowledge scores on COVID-19 in children will be significantly higher than their mean pretest knowledge scores.

*H2:* There will be a significant relationship between pretest knowledge of BSc Nursing students and certain demographic factors, including age, educational status, family type, income, prior knowledge of the students, educational status of the mother, educational status of the father, and place of residence.

### Delimitation

- The study is confined to 83 BSc Nursing students in their third and fourth years.
- The data collection period is only 1 week.

### REVIEW OF LITERATURE

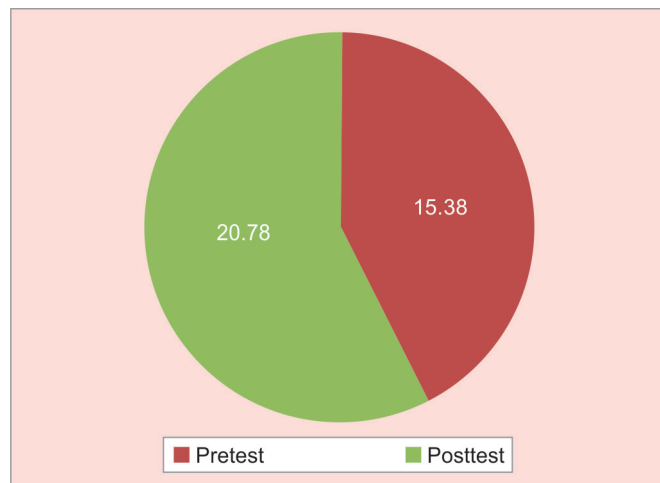
The study by Fahad Al-Sohime, Mohammed Hani Temah, Abdurrahman, Nemri Ali, and others (2020) aimed to determine the prevalence and course of COVID-19 in children. Major morbidity and mortality in the adult age-group are caused globally by a unique COVID-19 virus. Similarly, there is an increased risk of SARS-COV-2 infections in children in the pediatric population. They conducted a targeted literature search of studies that were published between December 1, 2019, and August 20, 2020. The purpose of this study was to investigate the cause and prognosis of children with COVID-19. According to the study's findings, viral respiratory infections result in significant societal expenditures for families and children. Compared to adults, children are less frequently affected by this virus. During this rapidly expanding epidemic, neonates delivered to COVID-19-infected moms represent a special population for which improved management and outcomes are urgently needed. Early detection of SARS-COV-2 infection in infants and children is crucial for the direct management of these kids as well as for the sake of public health.<sup>9</sup>

The study on severity-related risk factors in children with COVID-19 was carried out by Sophia Tambour, Alexandra's Makes, Chrisoula Kosmeri, Ekaterina Simoom, et al. A thorough literature analysis was conducted as part of the study to determine the underlying causes and danger signs of severe COVID-19 in kids. The study's findings showed that between 1.7 and 2% of COVID-19 diagnoses were in children. Children's deaths have been rare, and they frequently have milder illnesses than adults. The study identified comorbid diseases and early age (less than 1 year) as risk factors for serious disease in children.<sup>10</sup>

In 2020, Carlos Alberto, Nogueira-dess-Almeida, and colleagues did research on COVID-19 and children and adolescent obesity. The goal of this study was to pinpoint the causes of obese children's and adolescents' greater susceptibility to, severity from, and related health effects from COVID-19. The study's findings indicate that obese children experience more issues and symptoms than

**Table 1:** Children's mean COVID-19 knowledge scores before and after testing

Variables	Test	Mean	Standard deviation	t-value
Knowledge	Pretest	15.38	28.96	14.98*
	Posttest	20.78	68.54	

**Fig. 1:** Mean pretest and posttest knowledge score

youngsters of normal weight. The medical community should keep an eye on extra weight in kids who have COVID-19, whether they have it suspected or confirmed. Advice on weight-loss strategies should be given to the family and child.<sup>11</sup>

## MATERIALS AND METHODS

In this study, a pre-experimental quantitative research approach was applied. The sample for this study consisted of third and fourth year BSc Nursing students at Virudhunagar V. V. Vanniaperumal Nursing College for Women, who ranged in age from 18 to 22. The research was done over the course of a week. On the basis of the selection criteria, 83 samples were chosen using the purposive sampling technique. The researcher then gathered demographic information from nursing students. On the first day of data collection, information was gathered using a self-structured knowledge questionnaire to gauge the degree of knowledge among BSc Nursing students. The students were given a systematic teaching program following the pretest with the aid of a power point presentation, and the posttest was given on the seventh day following the pretest. For data analysis, the researcher organized and tallied the collected data.

### Data Analysis and Interpretation

- According to a pretest knowledge assessment of BSc Nursing students, 7 (8%) had adequate knowledge, 8 (10%) had moderately adequate knowledge, and 68 (82%) had adequate understanding of COVID-19 in children.
- After taking a posttest, BSc Nursing students' understanding of COVID-19 in children was found to be adequate in 76 (92%) cases, moderate in 7 (8%), and deficient in none of the cases.

Table 1 and Figure 1 show that the achieved "t" value of 14.98 is statistically significant at the 0.05 level and that the obtained mean posttest knowledge score of 20.78 is greater than the obtained mean pretest knowledge score of 15.38. The study's findings suggest that the organized training program was successful in enhancing BSc Nursing students' knowledge of COVID-19 in children.

There was a strong correlation between the students' educational position, their family structure, their place of residence, and their pretest knowledge score on COVID-19.

## CONCLUSION

Before beginning a structured teaching program, the majority of BSc Nursing students scored with a relatively adequate level of knowledge, and after completing the program, the majority still had an adequate understanding of COVID-19 in children.

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