

# A PRE-EXPERIMENTAL STUDY TO ASSESS THE LEVEL OF KNOWLEDGE ON CONVALESCENT PLASMA THERAPY IN PATIENTS WITH COVID 19 AMONG UNDERGRADUATE STUDENTS IN SRM COLLEGE OF NURSING, KATTANKULATHUR, CHENGALPET DISTRICT

Dhivya.N.<sup>1</sup>, Suganthi.K.<sup>2</sup>, Akiladevi<sup>3</sup>, C. Kanniammal<sup>4</sup>

<sup>1</sup>Tutor, SRM College of Nursing, SRMIST, Kancheepuram-603203, Tamilnadu, India.

<sup>2</sup>Assistant Professor, SRM College of Nursing, SRMIST, Kancheepuram-603203, Tamilnadu, India.

<sup>3</sup>Professor, SRM College of Nursing, SRMIST, Kancheepuram-603203, Tamilnadu, India.

<sup>4</sup>Dean, SRM College of Nursing, SRMIST, Kancheepuram-603203, Tamilnadu, India.

Email: dhivyan@srmist.edu.in

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## Abstract

**BACKGROUND:** The coronavirus disease 2019 (COVID19) outbreak has turned into a historic worldwide public health disaster with major humanitarian implications. As of April 19, 2020, the World Health Organization has received notification of 2 241 359 confirmed COVID19 cases, with 152 551 fatalities (6.8%) reported globally. Individuals with specific clinical diseases can be given convalescent plasma with these neutralising antibodies to decrease symptoms and death. The purpose of this study was to see how effective understanding of plasma therapy treatment in COVID 19 patients was among undergraduate students at SRM college of nursing in Kattankulathur. It's a pre-experimental, one-group, pre-test-post-test study. A total of 153 people were included in the study. Students in undergraduate were chosen using a non-probability purposive sampling approach. **RESULTS:** When comparing the pre- and post-test knowledge levels, the p value is 0.004, which is less than 0.01; hence, the p value is very significant. The mean of the post-test score is higher than the mean of the pre-test score. As a result, we may conclude that the post-test level of knowledge is much higher than the pre-test level of knowledge.

**Keywords:** COVID 19, PLASMA THERAPY, UNDER GRADUATE STUDENTS.

## INTRODUCTION

The coronavirus disease 2019 (COVID19) outbreak has turned into a historic worldwide public health disaster with major humanitarian implications. As of April 19, 2020, the World Health Organization has received notification of 2 241 359 confirmed COVID19 cases, with 152 551 fatalities (6.8%) reported globally. Because no authorised treatments or vaccinations exist, the current therapy for COVID19 caused by the new coronavirus SARSCoV2 is confined to general supportive care with the provision of critical care. Blood is taken and tested for specific microbe neutralising antibodies in people who recover from infectious illnesses. Individuals with high titers of neutralising antibody can be identified and convalescent plasma with these neutralising antibodies can be given to people with a specific clinical condition to minimise symptoms and death..

Infectious illnesses have been successfully treated with passive immunisation treatment. Ailments from the 1890s. A person who has been diagnosed with an infectious illness and whose blood has been taken and examined for antibodies that neutralise specific bacteria. Following the identification of people with high neutralising antibody titers Convalescent plasma with these neutralising antibodies can be given to patients. People with certain clinical illnesses, in order to reduce symptoms and death. As a result, convalescent plasma transfusion (CPT) has become a hot subject, particularly following large-scale outbreaks. The Administration of Food and Medicines, which administers and evaluates investigational CPT, recently proposed it. It is possible that the therapy of COVID-19 during public health will have an emergency clinical impact.

## MATERIALS AND METHODS

The quantitative method to research is used. The study was conducted using a pre-experimental, one-group pre-test-post-test research design. A total of 153 undergraduate students were chosen using a non-probability purposive sampling approach. The ethics committee of the SRM College of Nursing provided approval. Before collecting data, each participant gave their informed consent. The 153 nursing students were given multiple choice questions.

Section A: The investigator assessed the demographic factors by structured questionnaires.

Section B: The knowledge regarding convalescent plasma therapy in COVID-19 among undergraduate students were assessed by self-administered questionnaire. The questions were constructed in one form of multiple choices which is distributed via google form questionnaire. After distributing the tools to the samples, general instructions were given. In case of any doubts, the investigator clarified the doubts.

Scoring system: Each correct answer was given a score of 'one' mark and wrong answer 'zero' score and total score is 30

Scoring system: < 50% is considered as inadequate knowledge

50%-75% is considered as moderate knowledge and >75% is considered as adequate knowledge.

### Statistical Analysis

Statistical analysis makes quantitative information meaningful to the researcher. Statistical results help the investigator to summarize, organize, interpret, estimate, and communicate quantitative information. Chi square was used as a test of significant. Significant was at  $p < 0.01$  for interpretation of the results for significant.

## RESULTS AND DISCUSSION

In demographic variables out of 153 samples, were the age between 19-20 years (78.4%), were the age between 21-22 years (20.3%), were the age between 23-24 years (0.7%), were the age >25 years (0.7%), Regarding the gender, were the male is (19.6%), were the female is (80.4%), Regarding the source of information, were the book is (18.3%), were the lecture is (15.3%), were the clinical practice is (10.5%), were the internet is (56.2%) Regarding the residential area, were the rural area is (38.8%), were the semi urban area is (18.3%), were the urban area is (22.2%), were the town area is (20.9%).

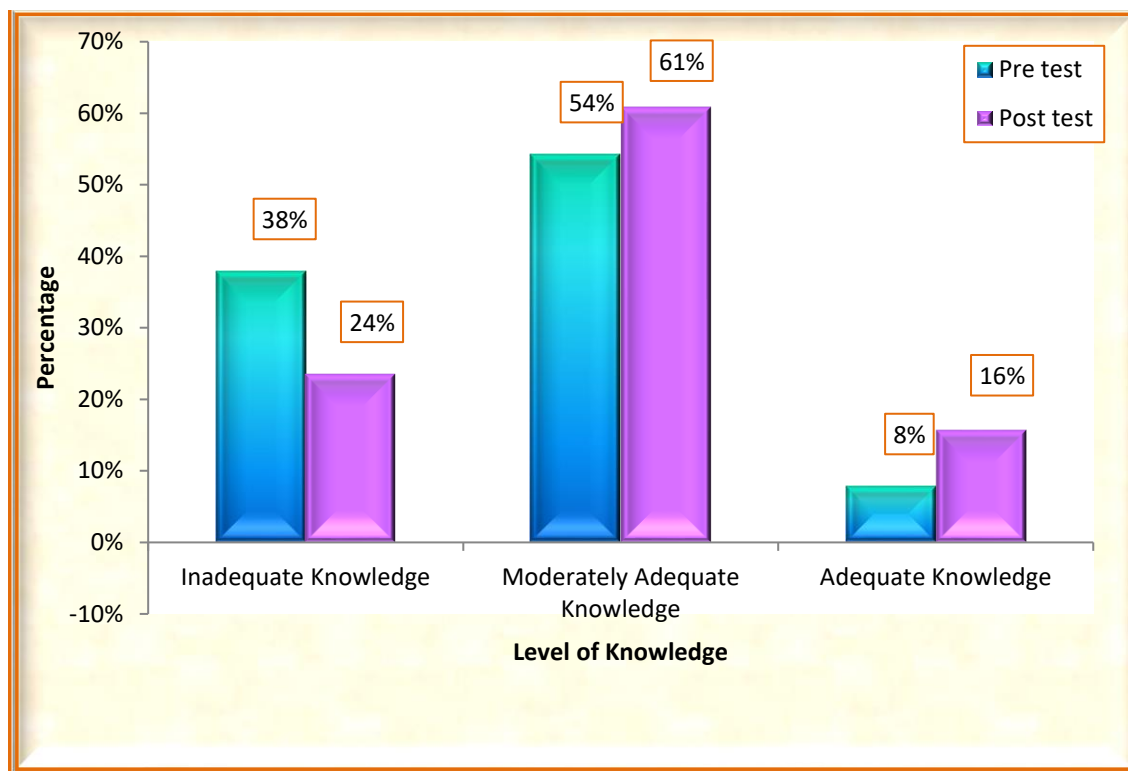


FIG Column Diagram Depicting The Pre And Post Test Level Of Knowledge Regarding The Treatment Of Patients With Covid 19 In Plasma Therapy

## DISCUSSION

A convalescent plasma therapy uses antibodies from COVID-19-infected individuals who have fully recovered. This is how this treatment can help the body battle the coronavirus.

The plasma part of blood from a primary infection but completely healed patient is isolated, providing antibodies against the SARS-CoV-2 virus. To fight the virus and prevent it from spreading further, this plasma is administered by injection of an infectious person. After the patient has recovered, he or she will be asked to donate blood so that their antibodies can be used to treat other patients who have been infected.

In this present study, in overall score of knowledge, the pre-test inadequate knowledge is (38%), moderately adequate knowledge is (54%), the adequate knowledge is (8%). The post-test in adequate knowledge is (24%), moderately adequate knowledge is (61%), adequate knowledge is (16%).

Comparison between the knowledge level of pre and post test scores, the p-value 0.004, which is less than 0.01, hence we can say that the p-value is highly significant. Therefore, we can say that there is high significant improvement in post-test level with compare to pre-test level of knowledge.

The p-value corresponding to the demographic variable "Age" is less than 0.05 and is significant at 5% level. All other p-values are not significant since they are not less than 0.05, hence we can say that the demographic variables "Gender, Source of information, Residential area" are not significantly associated with the level of knowledge.

## CONCLUSION

The purpose of this study was to examine the undergraduate students at SRM College of Nursing in Kattankulathur . understanding of plasma treatment in patients with covid 19. The study revealed that the investigator's educational intervention package was successful in increasing patients' awareness of plasma treatment in COVID 19 patients.

Relavant conflicts of intresets/ financial disclosure : The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be constructed as a potential conflict of intrest.

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