# Journal of Coastal Life Medicine

# Effect of Structured Teaching Programme on Knowledge Regarding Post Covid-19 Syndrome Among Public Living in South Indian Coast

**Dhivagar S[1], Prabavathy S[2], Revathi D[3], Boominathan V[4], Nithiyashri S[5], Jaya Pradha D[6], Santhiya V[7], Nathiya P[8]**

1Assistant Professor, Department of Psychiatric Nursing, Kasturba Gandhi Nursing College, Sri Balaji Vidyapeeth University, (deemed to be) University, Puducherry, India.

2Professor, Department of Psychiatric Nursing, Kasturba Gandhi Nursing College, Sri Balaji Vidyapeeth. (Deemed to be) University, Puducherry, India.

3, 4, 5 Tutors, Department of Psychiatric Nursing, Kasturba Gandhi Nursing College, Sri Balaji Vidyapeeth. (Deemed to be) University, Puducherry, India.

6Assistant Professor, Department of Obstetric Nursing, Kasturba Gandhi Nursing College, Sri Balaji Vidyapeeth. (Deemed to be) University, Puducherry, India.

7,8Assistant Professor, Department of Psychiatric Nursing, Sri Manakula Vinayagar Nursing College, Puducherry, India.

## Corresponding Author: Mr Dhivagar S,

Assistant Professor, Department of Psychiatric Nursing, Kasturba Gandhi Nursing College, Sri Balaji Vidyapeeth (deemed to be) University, Puducherry, India
Email: dhivagalaxy@gmail.com

## Abstract

The coastal life people with less academic background are more prone for illness which need awareness. The SARS-CoV-2 virus, which is the causative agent for the infectious illness COVID-19, spreads through infected air droplets and minute airborne particles. Fatigue, shortness of breath, and cognitive impairment are common complaints that develop after 3 months of the Covid -19 syndrome. Aim: The principal aim of our work was to assess the impact of a structured teaching program on the general public's comprehension level about Post COVID-19 syndrome. Methodology Our research was a quasi-experimental design which was used in the study, with a single group accomplishing quantitative pre- and post-tests. Sixty participants of the general public were carefully selected using a non-probability sampling technique. Pre- and post-tests were given, data was collected via self-structured questionnaires, and a organized educational program was delivered via power point. Lessons were educated in groups and one-on-one over the course of a week.  Result: The findings confirmed that the pretest knowledge score was 8.92 with a SD of 2.75 before the intervention, and the post-test average score was 16.77 with a SD of 2.102, indicating that there was a substantial increase in the level of knowledge from 31.7% to 88.3% after the organized Program. In terms of the relationship between pre-test and post-test knowledge levels and social and demographic variables, statistically significant correlations were identified in factors like education, occupation age, type of family, and history of comorbidity among the general public. Conclusion: The study concluded that a structured training program was very effective and highly statistically significant in raising public awareness of Post COVID-19 syndrome in patents living in the coastal part of Bay of Bengal.

## 1.  Introduction:

COVID-19 has impacted coastal residents, causing many people to suffer from enhanced medical and financial effects as a result of the pandemic. Coastal communities that rely on tourism and fishing have lost a lot of money, while limited healthcare options and overcrowding have raised infection risk. Beach closures and travel restrictions have also disrupted many people's daily lives. Coronavirus Disease 2019, or COVID-19, is an infectious virus that causes COVID-19 and severe acute pulmonary

# Journal of Coastal Life Medicine

syndrome coronavirus 2. (SARS-CoV-2). COVID-19 can spread through the air by inhaling virus droplets and minute airborne particles. Patients with this disease usually experience fever, coughing, breathing difficulties, and certain other symptoms. [1].

COVID-19 symptoms typically resolve within a couple of weeks for individuals affected. Nevertheless, some people's symptoms last longer than some others, especially those who were hospitalized. They could be minor to major in nature. Although experts are indeed learning regarding COVID-19, they frequently distinguish two phases of disease and recovery. [2].

Post-COVID conditions are defined as symptoms that persist for more than three months after infection. This is particularly common in critically ill patients who required admission to the hospital's critical care unit, placement on a life support respiratory machine, and possibly other forms of respiratory support.[3]. Individuals with a history of SARS-CoV-2 infection may experience symptoms for up to three months after the onset of COVID-19 symptoms that lasted for no less than two months and were not described by any other health condition. During this time, common symptoms include fatigue, breathlessness, and intellectual disability, which can interfere with daily activities. These symptoms may appear after recovering from an acute COVID-19 episode or may be present from the start. Furthermore, clinical signs may change or reappear over time..[5].

The WHO received information of 593,269,262 confirmed COVID-19 cases worldwide on August 22, 2022, including 6,446,547 fatalities. 6. On August 20, 2022, India reported to the WHO 4,43,27,890 confirmed COVID-19 cases, with 5,27,289 deaths. [7]. The Hindu reported 65 new COVID-19 cases in Pondicherry between August 18 and August 18, 2022, bringing the total to 1,72,270 cases and 1,967 fatalities. [8].

Post-COVID-19 effects can impair a person's ability to perform daily tasks such as work or housework. Diabetes, chronic liver disease, renal disease, and heart problems may appear as long-term consequences. [9]. Deaths can occur in post-COVID patients. This study will inform the public about the impacts of COVID-19 so that they can take

precautionary measures. [10]. As a result, they require a variety of teaching technique programmes, such as a structured teaching programme. A structured teaching schedule is a well-established framework of learning support that is aimed at enhancing overall independence. It will help to raise COVID-19 patients' knowledge of their condition. Hence the present research work was conducted to improve the comprehension regarding post covid-19 syndrome among general public.

## 2. Methodology:

The research work was carried through a quasi-experimental approach (one group is pre-test and another post-test) to examine public awareness of Post COVID-19 syndrome. 60 general public from the coastal life belt were selected using purposive non-probability sampling technique. Two sections were used to collect the data. Sociodemographic profiles of the general population are included in Part A, and a self-structured questionnaire that measures knowledge of post-COVID-19 syndrome is included in Section B. The pre-test was given before the structured teaching programme, which consisted of a week of lectures and discussions with the use of power point. The post-test was given following this part to assess how effective the organised teaching programme in improving the knowledge of the general public. The data were analyzed used differential and Inferential statistics. Informed consent was obtained from the each study population prior to data collection. The data was gathered by administering structured interviews to all members of the general public who fulfilled the inclusion criteria and were accessible at the moment of data collection.

## 3. Results:

The study included 60 participants. Out of the 60 people who were interviewed, the majority of the general public were 21 (35%) in the age ranges from 31- 40 years, 22 (36.7%) men and 38 (63.3%) women, 30 (50%) had only completed their secondary education, 23 (38.3%) worked in the private sector, 47 (78.3%) were Hindu, 41 (68.3%) were raised in nuclear families, 38 (63.3%) had previously been diagnosed with COVID-19, and 41 (68.3%) 41 people (68.3%) did not know what Post COVID-19 syndrome was. The frequency and

# Journal of Coastal Life Medicine

percentage distribution of demographic factors is shown in Table 1.

**Table 1:** The frequency and percentage analysis of demographic factors in the general population.

(N=60)

| SL. NO | DEMOGRAPHIC VARIABLES | FREQUENCY (N) | PERCENTAGE (%) |
|---|---|---|---|
| 1 | **Age in years** | | |
| | 18-20 | 1 | 1.7 |
| | 21-30 | 18 | 30 |
| | 31-40 | 21 | 35 |
| | 41-50 | 14 | 23.3 |
| | 51-60 | 6 | 10 |
| 2 | **Gender** | | |
| | Male | 22 | 36.7 |
| | Female | 38 | 63.3 |
| | Third Gender | 0 | 0 |
| 3 | **Education status** | | |
| | No formal education | 3 | 5 |
| | School education | 30 | 50 |
| | Under Graduate | 25 | 41.7 |
| | Post Graduate | 2 | 3.3 |
| 4 | **Occupational status** | | |
| | Government sector | 3 | 5 |
| | Private sector | 23 | 38.3 |
| | Self-Employment | 16 | 26.7 |
| | Home maker | 18 | 30 |
| 5 | **Religion** | | |

# Journal of Coastal Life Medicine

|   |   | Hindu | 47 | 78.3 |
|---|---|---|---|---|
|   |   | Christian | 11 | 18.3 |
|   |   | Muslin | 2 | 3.3 |
|   |   | Others | 0 | 0 |
| 6 | **Type of family** |   |   |   |
|   |   | Joint family | 19 | 31.7 |
|   |   | Nuclear family | 41 | 68.3 |
| 7 | **Have you diagnosed with COVID-19? If, yes when are you diagnosed, duration?** |   |   |   |
|   |   | Yes | 38 | 63.3 |
|   |   | No | 22 | 36.7 |
| 8 | **Are you aware of Post COVID-19 syndrome?** |   |   |   |
|   |   | Yes | 19 | 31.7 |
|   |   | No | 41 | 68.3 |
| 9 | **Are you suffering from any comorbidity?** |   |   |   |
|   |   | Yes | 34 | 56.7 |
|   |   | No | 26 | 43.3 |
| 10 | **Source of information about Post COVID-19 syndrome?** |   |   |   |
|   |   | Mass media | 13 | 21.7 |
|   |   | Family and friends | 2 | 3.3 |
|   |   | Health care professionals | 4 | 6.7 |
|   |   | Not aware about Post COVID-19 syndrome | 41 | 68.3 |

In pretest, Majority of people 41(68.3%) had moderate and 19(31.7%) had inadequate level of knowledge and the mean and standard deviation of the level of knowledge on Post COVID- 19 syndrome among general public is 8.92± 2.75. In post- test, Majority of people 53(88.3%) had adequate and 7(11.7%) had Moderate level of knowledge and the mean and standard deviation of the level of knowledge on Post COVID-19 syndrome among general public is 16.77± 2.102. The below table 2 shows the fpre-test and post-test degree of expertise regarding post COVID-19 syndrome

# Journal of Coastal Life Medicine

**Table 2:** Pre-test as well as post-test distribution of knowledge about Post COVID-19 syndrome among the general public in terms of frequency and percentage.          (N=60)

| LEVEL OF KNOWLEDGE | PRETEST | | POST TEST | |
|---|---|---|---|---|
| | N | % | N | % |
| INADEQUATE | 19 | 31.7 | 0 | 0 |
| MODERATE | 41 | 68.3 | 7 | 11.7 |
| ADEQUATE | 0 | 0 | 53 | 88.3 |
| **Mean Standard deviation** | 8.92± 2.75 | | 16.77± 2.102 | |

**Figure 1:** Proportion of participants' knowledge of Post-COVID-19 syndrome at the pre-and the post-test levels.



Pretest and post -test level of knowledge regarding Post covid-19 syndrome among general public.
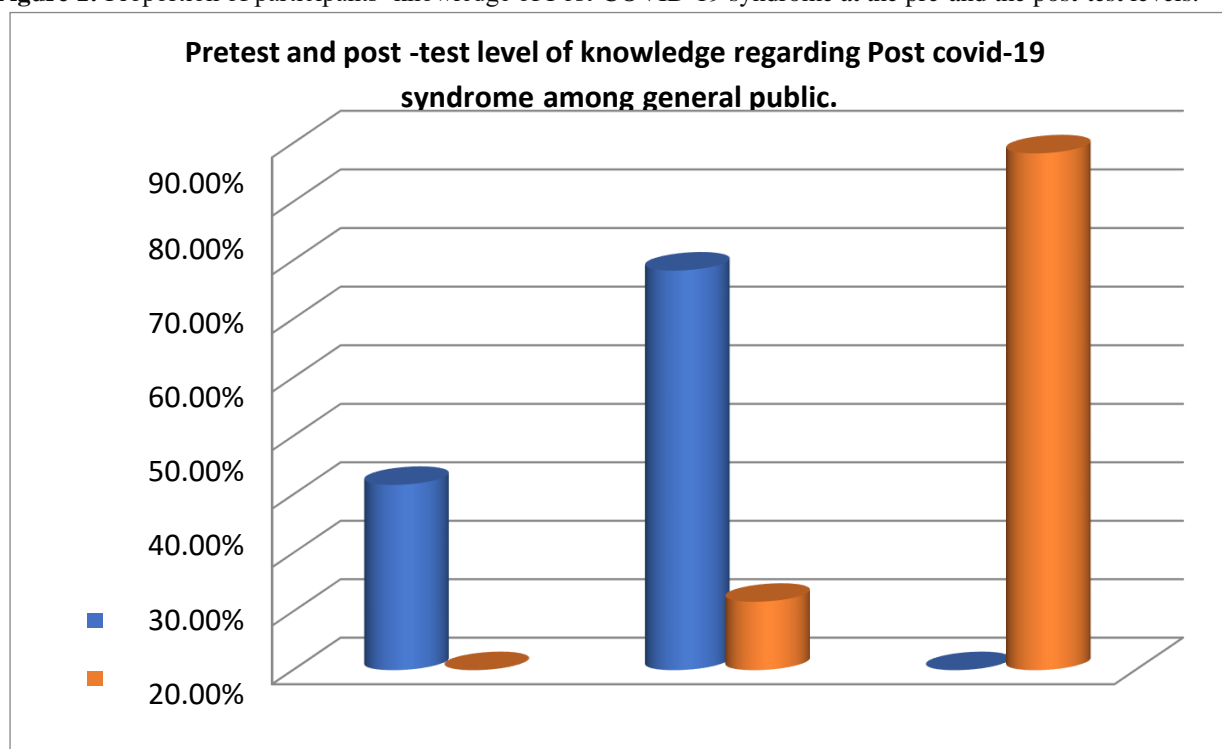
| | DEQUATEE | MODERATE | ADEQUATE |
|---|---|---|---|
| PRETEST | 31.70% | 68.30% | 0% |
| POST TEST | 0% | 11.70% | 88.30% |

This work examined the impact of structured educational program on the expertise and awareness of Post COVID-19 syndrome among the general public living along the Bay of Bengal's coast. The study found that the average score on the pre-test was 8.92 ± 2.75, while the score on the post-test was

# Journal of Coastal Life Medicine

16.77 ± 2.102. The paired t-test value of t = -33.56 indicated a significant difference in the effectiveness of organised teaching programs on improving knowledge of Post COVID-19 syndrome among the general public in the area.

**Table 3:** Effectiveness of structured Teaching Programme on level of knowledgeregarding Post COVID-19 syndrome among general public.   (N=60)

| GROUP | TEST | MEAN | STANDARD DEVIATON | MEAN DIFFERENCE | 't' VALUE Paired-t test | df | 'p' VALUE |
|---|---|---|---|---|---|---|---|
| **STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING POST COVID-19 SYNDROME AMONG GENERAL PUBLIC.** | **Pre test** | 8.92 | 2.75 | -7.85 | -33.56 | 59 | **0.000** (HS) |
| | **Post test** | 16.77 | 2.102 | | | | |

***-p < 0.001 highly  significant , NS-Non Significant.*

Regarding the association of pre and post-test knowledge with selected demographic variables, variables such as, Age in years, Educational Status, Occupational status, Type of family and Are you suffering from any comorbidity had shown statistically significant association between the post-test level of knowledge regarding Post COVID-19 syndrome coastal public patients with their selected socio-demographic variables

**Journal of Coastal Life Medicine**

**Table 4:** Association between the pretest and post-test level of knowledge regarding PostCOVID-19 syndrome among general public with their selected socio-demographic variables. (N=60)

| S L . N O | DEMOGRAPHIC VARIABLES | LEVEL OF KNOWLEDGE | | | | Chi-square $X^2$ and P-Value |
|---|---|---|---|---|---|---|
| | | MODERATE | | ADEQUATE | | |
| | | N | % | N | % | |
| 1 | **Age in years** | | | | | |
| | 18-20 | 0 | 0 | 1 | 1.9 | $X^2$=21.18 Df=4 |
| | 21-30 | 0 | 0 | 18 | 34 | |
| | 31-40 | 1 | 14.3 | 20 | 37.7 | p =0.000 |
| | 41-50 | 2 | 28.6 | 12 | 22.6 | |
| | 51-60 | 4 | 57.1 | 2 | 3.8 | **S |
| 2 | **Gender** | | | | | |
| | Male | 1 | 14.3 | 21 | 39.6 | $X^2$=1.709 |
| | Female | 6 | 85.7 | 32 | 60.4 | Df=1 |
| | Third Gender | 0 | 0 | 0 | 0 | p =0.191 NS |
| 3 | **Education status** | | | | | |
| | No formal education | 2 | 28.6 | 1 | 1.8 | $X^2$=13.1 D=3 |
| | School education | 5 | 71.4 | 25 | 47.2 | p =0.004 |
| | Under Graduate | 0 | 0 | 25 | 47.2 | |
| | Post Graduate | 0 | 0 | 2 | 3.8 | *S |
| 4 | **Occupational status** | | | | | |
| | Government sector | 0 | 0 | 3 | 5.7 | $X^2$=12.08 Df=3 |
| | Private sector | 0 | 0 | 23 | 43.4 | p =0.007 |
| | Self-Employment | 1 | 14.3 | 15 | 28.3 | *S |
| | Home maker | 6 | 85.7 | 12 | 22.6 | |
| 5 | **Religion** | | | | | |

# Journal of Coastal Life Medicine

| | | | | | | |
|---|---|---|---|---|---|---|
| | Hindu | 6 | 85.7 | 41 | 77.4 | $X^2$=0.390 Df=2 |
| | Christian | 1 | 14.3 | 10 | 18.9 | p =0.823NS |
| | Muslin | 0 | 0 | 2 | 3.8 | |
| | Others | 0 | 0 | 0 | 0 | |
| 6 | **Type of family** | | | | | **$X^2$=10.69Df=1** |
| | Joint family | 6 | 85.7 | 13 | 24.5 | **p =0.001** |
| | Nuclear family | 1 | 14.3 | 40 | 75.5 | **\*S** |
| 7 | **Have you diagnosed with COVID-19? If, yes when are you diagnosed, duration?** | | | | | $X^2$=1.709 Df=1 |
| | Yes | 6 | 85.7 | 32 | 60.4 | p =0.191 |
| | No | 1 | 14.3 | 21 | 39.6 | (NS) |
| 8 | **Are you aware of Post COVID-19 syndrome?** | | | | | $X^2$=3.67 |
| | Yes | 0 | 0 | 19 | 35.8 | Df=1 |
| | No | 7 | 100 | 34 | 64.2 | p =0.055 NS |
| 9 | **Are you suffering from any comorbidity?** | | | | | **$X^2$=6.06Df=1** |
| | Yes | 7 | 100 | 27 | 50.9 | **p =0.014** |
| | No | 0 | 0 | 26 | 49.1 | **\*S** |
| 10 | **Source of information about Post COVID-19 syndrome?** | | | | | |
| | Mass media | 0 | 0 | 13 | 24.5 | $X^2$=3.67 Df=3 |
| | Family and friends | 0 | 0 | 2 | 3.8 | p =0.299NS |
| | Health care Professionals | 0 | 0 | 4 | 7.5 | |
| | Not aware about Post COVID-19 syndrome | 7 | 100 | 34 | 64.2 | |

# Journal of Coastal Life Medicine

## 4. Discussion:

The chief goal of this research work was to see how a organised teaching program affected coastal residents' awareness of Post COVID-19 symptomatology. A quasi-experimental research method was employed to assess public awareness of Post COVID-19 syndrome. 60 members of the general public were chosen using the purposeful sampling as non-probability technique. The information was gathered in two sections. Part A contains general population sociodemographic profiles, and Section B contains a self-structured questionnaire that evaluates knowledge of post-COVID-19 syndrome. The pre-test was administered prior to the structured teaching programme, which consisted of a week of lectures and discussions using power point. The post-test was administered following this part to assess how effective the organised teaching programme in improving the knowledge of the general-public.

Regarding demographic profile, Out of the 60 people who were interviewed, the majority of the general public were 21 (35%) in the age group ranges from 31 to 40 years, 22 (36.7%) men and 38 (63.3%) women, 30 (50%) had only completed their secondary education, 23 (38.3%) worked in the private sector, 47 (78.3%) were Hindu, 41 (68.3%) were raised in nuclear families, 38 (63.3%) had previously been diagnosed with COVID-19, and 41 (68.3%) 41 people (68.3%) did not know what Post COVID-19 syndrome was. See Table 1

The study's initial and the main objective was to evaluate participants' knowledge of COVID-19 syndrome. In the pretest, the majority of people 41(68.3%) had moderate and 19(31.7%) had inadequate level of knowledge on Post COVID-19 syndrome, and the mean and standard deviation of the level of knowledge among the general public is 8.92± 2.75.In post- test, Majority of people 53(88.3%) had adequate and 7(11.7%) had moderate degree of expertise and the mean and the SD of the degree of knowledge on Post COVID-19 syndrome among general public is 16.77± 2.102. The below table 2 shows the pre-test and the post-test degree of knowledge regarding post COVID-19 syndrome. The present study was supported by Ankita P, Stuti S (2022) who studied the impact of organised teaching programmes on public awareness of post-

Covid-19 complications in particular areas. According to the findings, none of the population from the chosen region performed exceptionally well or extremely well on the pre-test, with only 16.67% having minimum levels of knowledge, 50% having medium levels, and 33.33% having good levels. In the post-test, 48.33% of the selected region's participants scored at the very excellent degree of knowledge, 5% at the outstanding level of knowledge, and 46.67% at the good level of knowledge.[11].

The study's second goal was to assess the usefulness and efficacy of the organized teaching programme. Regarding the efficacy of structured teaching programmes on knowledge about Post COVID-19 syndrome in the general public, the mean score in the pre-test was 8.92 2.75, and the mean score in the post-test was 16.77 2.102. The calculated paired't' test value of $t = -33.56$ indicates a statistically significant difference in the effectiveness of structured teaching programmes on general public knowledge of Post COVID-19 syndrome.. The present study was supported by Sudhakar A, Revathy S (2022) [12] who conducted a study on the efficacy of structured teaching programme on Covid-19 among students. The results indicated that the structured curriculum had improved participants' knowledge of COVID-19, as evidenced by the values following the COVID-19 structured curriculum test (t value was 14.07 with a p value of 0.001) and the result was significant at p 0.5.

While no specific nutrition or medication can prevent or cure COVID-19, a healthy diet and lifestyle can improve overall immune function. Proper hydration, wholesome meals with adequate protein, vitamins, and minerals, and regular physical activity can all aid the body's defences in their performance. Antivirals and steroids, for example, may be prescribed to treat COVID-19 symptoms and side effects, but their usage ought to be closely monitored by a healthcare professional. Vaccination is the most effective method of preventing serious illness and virus transmission at the moment[13,14,15.]

In this context, education and awareness programmes play a critical role in progression of the disease and morbidity and mortality reduction.

# Journal of Coastal Life Medicine

## 5. Conclusion:

The conclusion of this research indicate that, most of the general public, especially those from coastal areas, seemed to be uninformed of Post COVID-19 symptomatology before the intervention took place, yet, they had managed to gain adequate knowledge by the time of the post-test. Following a thorough investigation, it was discovered that there is a strong correlation between degree of knowledge score with age, education status, occupation status, family type, and comorbidities among the general public living along the Bay of Bengal's coast. The organized teaching programme was found to be very effective and statistcally relevant in raising public awareness of Post COVID-19 syndrome, according to the study.

**Financial support and sponsorship**

Nil.

**Conflicts of interest**

There are no conflicts of interest.

**Reference**:

[1] WHO. coronavirus 19 (COVID 19). Available at: https://www.who.int/health-topics/coronavirus#tab cited on June 28, 2021. at 11:5

[2] Park DI. Development and validation of a knowledge, attitudes and practices questionnaire on COVID-19 (KAP COVID-19). Int J Environ Res Public Health. 2021;18:7493.

[3] Chippa V, Aleem A, Anjum F. Post-Acute Coronavirus (COVID-19) Syndrome. 2022.Post-Acute Coronavirus (COVID-19) Syndrome.

[4] Sandra Lopez-Leon, Talia Wegman-Ostrovsky, et al. long-term effects of COVID-19: a systematic review and meta-analysis. Nature journal. 2021. Page no 1-16.

[5] Andrade B.; Siqueira, S; dos Santos Freitas, A.; et al. Long-COVID and Post-COVID Health Complications: An Up-to-Date Review on Clinical Conditions and Their Possible Molecular Mechanisms. Viruses 2021, vol 13, page no 700

[6] World Health Education. Coronavirus disease (COVID-19): Post COVID-19. 2021

[7] M. A., PourM.M. , BehnezhadF., Alireza M.A.Late Complications of COVID-19; a Systematic Review of Current Evidence, 2021 Jan 20. doi: 10.22037

[8] Dong, X.; Cao, Y.; Yuan, Y.; Yang, Y.; Yan, Y.; Akdis, C.A.; Gao, Y. Clinical Characteristics of 140 Patients Infected with SARS-CoV-2 in Wuhan, China. Allergy 2020, volume 75, page no 1730–1741

[9] Prasanna V. A study to assess the effectiveness on structured teaching programme on knowledge and attitude regarding Covid-19 and its prevention among adults at selected urban area in Khammam, Telangana, India. Int J Biomed Investig. 2021;4:134.

[10] World Health Organization [Internet]. Coronavirus disease (COVID-19); 2021 [cited 2021 Oct 21].

[11] Ankita P, Stuti S :" impact of structured teaching programmes on people's awareness of post-Covid-19 complications" IJRHS; 2022; 12 -13

[12] Sudhakar A, Revathy S: the Efficacy of structured teaching programme on Covid-19 among students; Indian Journal of Holistic Nursing Volume 13, Issue 1 - 2022,

[13] S, Parthasarathy, M. SUNDARARAJAN, and Manimaran. A. "Insights Into Corona/Coronavirus Disease 2019 Pandemic – Opinion Versus Evidence". *Asian Journal of Pharmaceutical and Clinical Research*, vol. 14, no. 7, May 2021, pp. 13-15, doi:10.22159/ajpcr.2021.v14i7.41754.

[14] Suchitra M R, & Parthasarathy S. (2020).Nutrition and corona virus: Plan a diet in a pandemic. International Journal of Research in Pharmaceutical Sciences, 11(SPL1), 110-114.https://doi.org/10.26452/ijrps.v11iSPL1.2241.

[15] Suchitra MR, Parthasarathy S. Partha's new techniques to counter corona virus-the usefulness of Camphor vapour and Mandl's paint. IJRPS 2020;11:472-4. DOI: https://doi.org/10.26452/ijrps.v11iSPL1.2822