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# ASSESSMENT OF KNOWLEDGE REGARDING POST COVID -19 SYNDROME AMONG ADULTS

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## ABSTRACT

The present study was to assess the knowledge regarding Post Covid- 19 syndrome among adults coming in selected OPDs of Muthoot Health Care, Kozhencherry. The objectives of the study were to assess the knowledge regarding Post Covid-19 syndrome among adults and to find out the association between the knowledge score regarding Post Covid-19 syndrome among adults with selected demographic variables. A quantitative approach with a cross sectional descriptive survey design was used in this study. Convenience sampling technique was used to select 150 samples from the group. Main study was conducted from 3rd December 2021 to 7th December 2021. The data was analyzed using descriptive and inferential statistics. The result revealed that 12.67% of adults have poor knowledge, 49.30% have average knowledge and 38% have good knowledge regarding Post Covid-19 syndrome. Chi-square analysis showed that there was significant association with the knowledge of Post Covid-19 syndrome and the selected demographic variable, gender and the calculated value is greater than the table value. Thus the result concluded that adults were having some knowledge about Post Covid19 syndrome.


**Keywords:** Knowledge, Post Covid 19 syndrome, Adults.

## CHAPTER -1

## INTRODUCTION

A disease is a particular abnormal condition that negatively affects the structure or function of all or part of an organism, and that is not due to any immediate external injury. Diseases are often known to be medical conditions that are associated with specific signs and symptoms. A disease may be caused by external factors such as pathogens or by internal dysfunctions. For example, internal dysfunctions of the immune system can produce a variety of different diseases, including various forms of immunodeficiency, hypersensitivity, allergies and autoimmune disorders.[1]

Corona virus disease (Covid-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. However, some will become seriously ill and require medical attention. Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illness. Anyone can get sick with Covid-19 and become seriously ill or die at any age.

The best way to prevent and slow down transmission is to be well informed about the disease and how the virus spreads. The virus can spread from an infected person's mouth or nose in small liquid particles when they cough, sneeze, speak, sing or breathe. These particles range from larger respiratory droplets to smaller aerosols. It is important to practice respiratory etiquette, for example by coughing into a flexed elbow, and to stay home and self-isolate until you recover if you feel unwell.[2]

Post Covid conditions are a wide range of new, returning, or ongoing health problems people can experience four or more weeks after first being infected with the virus that causes Covid-19. Even people who did not have Covid-19 symptoms in the days or weeks after they were infected can have Post Covid conditions. These conditions can present as different types and combinations of health problems for different lengths of time. Post Covid condition is an umbrella term for the wide range of health consequences that are present four or more weeks after infection with SARS-CoV-2. The time frame of four or more weeks provides a rough approximation of effects that occur beyond the acute period, but the time frame might change .

It can be difficult to distinguish symptoms caused by Post-Covid conditions from symptoms that occur for other reasons. Patients experiencing the acute and post-acute effects of Covid-19, along with social isolation resulting from Covid 19 pandemic prevention measures, frequently suffer from symptoms of depression, anxiety, or mood changes. Alternative reasons for health problems need to be considered, such as other diagnoses, unmasking of pre-existing health conditions, or even SARS-CoV-2 reinfection.

It is also possible that some patients with Post-Covid conditions will not have had positive tests for SARS-CoV-2 because of a lack of testing or inaccurate testing during the acute period, or because of waning antibody levels or false-negative antibody testing during follow up.

These Post-Covid conditions may also be known as long Covid, long-haul Covid, post-acute Covid-19, long-term effects of Covid, or chronic Covid. CDC and experts around the world are working to learn more about short- and long-term health effects associated with Covid-19, who gets them, and why.

Hospitalizations and severe illnesses for lung-related diseases, including Covid-19, can cause health effects like severe weakness and exhaustion during the recovery period.

Effects of hospitalization can also include post-intensive care syndrome (PICS), which refers to health effects that begin when a person is in an intensive care unit (ICU) and can remain after a person returns home. These effects can include severe weakness, problems with thinking and judgment, and post-traumatic stress disorder (PTSD). PTSD involves long-term reactions to a very stressful event.

A person of any age who has had Covid-19 can later develop a Post-Covid condition. Although Post-Covid conditions appear to be less common in children and adolescents than in adults, long-term effects after Covid-19 do occur in children and adolescents.[3]

**Background of the problem**

Corona virus disease is a global public health problem and has evolved to become a pandemic.[3]A novel coronavirus (CoV) named '2019-nCoV' or '2019 novel coronavirus' or 'Covid-19' by the World Health Organization (WHO) is in charge of the current outbreak of pneumonia that began at the beginning of December 2019 near in Wuhan City, Hubei Province, China. Covid-19 is a pathogenic virus. Covid-19 has reached to more than 150 nations, including China, and has caused WHO to call the disease a worldwide pandemic. By the time of 2nd week of April 2020, this Covid-19 cases exceeded 18,738,58, although more than 1,160,45 deaths were recorded worldwide and United States of America became the global epicentre of coronavirus. More than one-third of the Covid-19 instances are outside of China. Past pandemics that have existed in the past decade or so, like bird flu, swine flu, and SARS, it is hard to find out the comparison between those pandemics and this coronavirus.[4]

Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a Corona virus called SARS-associated coronavirus (SARS-COV). SARS was first reported in Asia in February 2003. The illness spread to more than two dozen countries in North America, South
America, Europe, and Asia before the SARS global outbreak of 2003 was contained. Since 2004, there have not been any known cases of SARS reported anywhere in the world. [5]

In 2019, a new coronavirus was identified as the cause of a disease outbreak that originated in China. The virus is known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).
The disease it causes is called coronavirus disease 2019 (Covid-19). In March 2020, the World Health Organization (WHO) declared the Covid-19 outbreak a pandemic.[6]

The first case of Covid 19 in India were reported on 30 January 2020 in Thrissur, among 3
Indian medical students who had returned from Wuhan , the epicentre of pandemic.[7]

Infection rates started to drop in September along with the number of new and active cases.
Daily cases peaked mid September with over 90,000 cases reported per day, dropping to below 13,000 in January 2021. A second wave began by mid May 2021 was much more devastating than the first with shortage of vaccines, hospital beds, oxygen cylinders and other medical supplies in the part of the country.[7]

Kerala now has the second highest number of confirmed cases in India after Maharashtra. As of July 2021, more than 90% of known cases were due to community spread. India began its vaccination programme on 16 January 2021 with Astrazeneca vaccine (covishield) and Indigenous covaxin. As of 17 August 2021, the country has administered over 550 million vaccine doses.[7]

Although the majority of the patients who contracted Covid-19 are asymptomatic or have mild to moderate disease, approximately 5% to 8% of infected patients develop hypoxia, bilateral lung infiltrates, decreased lung compliance requiring non-invasive ventilation(NIV) or mechanical ventilatory support. The management of Covid-19 infection is mainly supportive. Although many therapeutics such as antiviral drugs (remdesevir), monoclonal antibodies (e.g., bamlanivimab/etesevimab, casirivimab/imdevimab), anti-inflammatory drugs (e.g., dexamethasone),

immunomodulatory agents (e.g., baricitinib, tocilizumab) is available under emergency use authorization (EUA) for the management of Covid-19, the utility of these treatments varies based on the timing and severity of illness and/or certain risk factors. The previous epidemics of SARS-CoV and MERS-CoV left individuals who recovered from these viral illnesses with persistent symptoms of severe fatigue, decreased quality of life (QOL), persistent shortness of breath, and behavioural health problems that resulted in a significant burden on local healthcare systems where the epidemics occurred. Similarly, a constellation of various clinical symptoms termed Post-Acute Covid-19 syndrome has been described in a minor proportion of patients who recovered from SARS-CoV-2 induced Covid-19 despite biochemical evidence that the replication of SARS CoV 2 ceases to exist after four weeks after the initial infection (based on the sampling of viral isolates from the respiratory tract and not the nasopharyngeal/oropharyngeal specimen).[8]

Although most people with Covid-19 get better within weeks of illness, some people experience Post Covid conditions. Post-Covid conditions are a wide range of new, returning, or ongoing health problems people can experience four or more weeks after first being infected with the virus that causes Covid-19. Even people who didn't have Covid-19 symptoms in the days or weeks after they were infected can have Post Covid conditions. These Post Covid conditions may also be known as long Covid, long haul Covid, Post Acute Covid-19, long term effects of Covid, or chronic Covid. These conditions can present as different types and combinations of health problems for different lengths of time .[2]

Post-Acute Covid-19 is a syndrome characterized by the persistence of clinical symptoms beyond four weeks from the onset of acute symptoms. The Center for Disease Control (CDC) has formulated "Post Covid conditions" to describe health issues that persist more than four weeks after being infected with Covid-19.[4] The typical clinical symptoms in "long covid" are tiredness, dyspnea, fatigue, brain fogginess, autonomic dysfunction, headache, persistent loss of smell or taste, cough, depression, low-grade fevers, palpitations, dizziness, muscle pain, and joint pains.[9]

Multiorgan effects of Covid-19 include clinical manifestations pertaining to the cardiovascular, pulmonary, renal, and neuropsychiatric organ systems, although the duration of these multiorgan system effects is unclear. Long-term "effects of Covid-19 treatment or hospitalization" are similar to other severe infections. They include post-intensive care syndrome(PICS), resulting in extreme weakness and posttraumatic stress disorder. Many of the patients with these complications from Covid-19 are getting better with time. Post Covid-19 care clinics are being opened at multiple medical centres across the USA to address these specific needs.

**Need and significance of the study**

The countries with the highest share of Covid-19 cases worldwide included the United States, India, and Brazil with the U.S. accounting for around 19 percent of cases worldwide. This statistic shows the distribution of Covid-19 cases worldwide as of November 24, 2021.The SARS-CoV-2 virus is the seventh known coronavirus to infect

humans; its emergence makes it the third in recent years to cause widespread infectious disease, following the viruses responsible for SARS and MERS. Common human coronaviruses typically cause mild symptoms such as a cough or a cold, but the novel coronavirus SARS-CoV2 has led to more severe respiratory illnesses and deaths worldwide.[12]

The exact nature of symptoms and number of people who experience long-term symptoms is unknown and varies according to the definition used, the population being studied, and the time period used in the study. A survey by the UK Office for National Statistics estimated that about 14% of people who tested positive for SARS-CoV-2 experienced one or more symptoms for longer than 3 months. A study from University of Oxford of 273,618 survivors of Covid-19, mainly from the United States, showed that about 37% experienced one or more symptoms between 3 to 6 months after diagnosis.[13]

A prospective cohort study from Wuhan, China to evaluate the long-term consequences of acute Covid was evaluated by comprehensive in-person evaluation of 1,733 patients at 6 months from symptom onset. The study utilized survey questionnaires, physical examination, 6-min walk tests (6MWT) and blood tests and, in selected cases, pulmonary function tests (PFTs), highresolution computed tomography of the chest and ultrasonography to evaluate Post-Acute Covid-19 end organ injury. A majority of the patients (76%) reported at least one symptom. Similar to other studies, fatigue/muscular weakness was the most commonly reported symptom (63%), followed by sleep difficulties (26%) and anxiety/depression (23%). These studies provide early evidence to aid the identification of people at high risk for Post-Acute Covid-19. The severity of illness during acute Covid-19 (measured, for example, by admission to an intensive care unit (ICU) and/or requirement for non-invasive and/or invasive mechanical ventilation) has been significantly associated with the presence or persistence of symptoms (such as dyspnea, fatigue/muscular weakness and PTSD), reduction in health-related quality of life scores, pulmonary function abnormalities and radiographic abnormalities in the Post-Acute Covid-19 setting.[14]

A prospective study conducted in Ankara city hospital among 10007 participants recovered from covid 19 by using a single centre structured questionnaire to investigate the prevalence and characteristics of the Post Covid syndrome among covid 19 survivors and to determine the factors associated with persistent symptoms and the findings indicated that 39.0% had at least one comorbidity and 47.5% had persistent symptoms . The study underlined the fact that the prevalence of Post Covid syndrome is higher than expected and concerns many systems.[11]

The need of the study is to assess the knowledge regarding Post Covid -19 syndrome among adults in general population and to reduce it's complications in the population which is very relevant in today's situation. No much studies are conducted to assess the knowledge regarding Post Covid syndrome and people may not be much aware about it as it is a new condition.

Studies are still going on regarding Post Covid syndrome.

**Statement of the problem**

A study to assess the knowledge regarding Post Covid -19 syndrome among adults coming in selected OPDs in Muthoot Health Care, Kozhencherry.

**Objectives**

The objectives of study are:

assess the knowledge regarding Post Covid -19 syndrome among adults.

find out the association between the knowledge score regarding Post ovid-19 syndrome among adults with selected demographic variables.

**Operational definitions**

**1.**Assess: In this study, assess refers to evaluation or estimation of the knowledge level of adults regarding Post Covid -19 syndromes.

**2.**Knowledge: In this study knowledge refers to correct response given by the adults regarding Post Covid-19 syndrome assessed by structured knowledge questionnaire.

**3.**Post Covid-19 syndrome: The persistence of symptoms 3 or 4 week after the onset of acute Covid -19 infection .[2]

**4.**Adults: In this study adults are people between 19 -59 years of age.

**Assumptions**

Adults are aware of Post Covid 19 syndrome.

# CHAPTER 2

## REVIEW OF LITERATURE

A research literature review is a written synthesis of evidence on a research problem. Researchers typically undertake a literature review as an early step in conducting a study. This chapter describes activities associated with literature reviews, including locating and critically appraising studies.[16]

Review of literature is a key step of research process. It involves systematic identification, scrutinising and summary of written material that contain information on a research problem.[17]

Review of literature is defined as a broad comprehensive in-depth. systematic and critical review of scholarly publication, unpublished scholarly print materials. Audio visual materials and personal communication.[17]

A Literature Review is a body of text that aims to review the critical points of knowledge on a particular topic of research.[17]

Review of literature is defined as broad and comprehensive in depth systematic and critical review of scholarly print materials, audio-visual materials and personal communication.
Literature reviews are a very important basis for conducting are search in the field.[17]

The review of literature is arranged in the following headings

- Incidence and prevalence of Post Covid 19 syndrome.
- Assessment of knowledge, attitude and practices of Covid-19.

**Incidence and prevalance of Post Covid -19 syndrome**

A prospective cohort study was conducted at Dhaka Medical College Hospital between June 2021 and August 10 2020 among 400 patients to assess the incidence, association and risk factors associated with the development of the Post Covid 19 syndrome using structured questionnaire indicated that total 46% patients developed Post Covid 19 symptoms.[4]

A prospective cohort study was conducted at the emergency department in a hospital in Germany between 27 February to 29 April 2020 to analyse the incidence of Post Acute Covid 19 syndrome and its components and to evaluate the acute infection phase associated risk factors. The outcome predictors were analysed by multiple logistic regression. The result showed that PCS

was detected in 141 patients. [12]

A prospective study conducted in Ankara city hospital among 10007 participants recovered from covid 19 by using a single centre structured questionnaire to investigate the prevalence and characteristics of the Post Covid syndrome among Covid 19 survivors and to determine the factors associated with persistent symptoms and the findings indicated that 39.0% had at least one comorbidity and 47.5% had persistent symptoms . The study underlined the fact that the prevalence of post covid syndrome is higher than expected and concerns many systems. [11]

**Assessment of knowledge, attitude and practices of Covid-19.**

A prospective cross sectional web based survey was conducted among young adults with T1DM (aged 18-30 years) in the North, Central, South, and West zones of India among 212 participants to assess knowledge, attitude, and practices (KAP) of young adults with type 1 diabetes mellitus

(T1DM) towards Covid-19 amid nationwide lockdown in India from April 25, 2020 to May 2, 2020 using KAP questionnaire. Most (74%) had an average knowledge score (mean ± 1SD). Higher educational status, urban residence, and being married were associated with better knowledge scores; however, only urban residence was found to be statistically significant on multinomial logistic regression. Most (88%) felt that being a patient of T1DM, they were at higher risk of getting infected with Covid-19. At the same time, 98% were confident about selfprotection.[10]

A retrospective online survey based study was conducted at different hospitals in Netherlands and Belgium on August 13 2020 among 2113 members of two Facebook groups for corona virus patients with persistent complaints to assess whether multiple relevant symptoms recover following the onset of symptoms in hospitalized and non hospitalized patients with covid 19 by using knowledge and belief questionnaires and the samples were selected using convenience sampling technique and the results revealed that the median number of symptoms during the infection

reduced over time (median 14 (11-17) versus 6(4-9) p<0.001). Fatigue and dyspnoea were the prevalent symptoms fatigue 95% and dyspnoea 87% .[15]

A study was conducted at Royal children's hospital Melbourne Australia between 21 March 2020 and March 17 2021 to assess the post acute covid 19 outcomes in children with mild and asymptomatic disease among 171 children by using standardized clinical proforma indicated that most cases of covid 19 (136 (80%0 of 171 children) showed post covid 19 symptoms during the

period July and corresponding to the peak in August 2020. [18]

A prospective observational cohort study was conducted in UK between April and 14 September

2020 among 201 samples to assess the multiorgan impairment in low-risk individuals with postCOVID-19 syndrome by using standardized questionnaire and organ specific matrices by biochemical and MRI indicated that single organ and multiple organ failure in 70 % and 29%

respectively. [19]

A cross sectional study was conducted in North Central and West zones of India on 15 May 2020 to assess knowledge, attitude, and practices of young adults with type 1 diabetes mellitus towards COVID-19 amid nationwide lockdown in India. Among 212 participants by using questionnaire indicated that 74 % had an average knowledge score. Higher educational status, urban residence,

married were associated with better knowledge score.[20]

A cross sectional study was conducted in United states and United Kingdom to assess knowledge and perceptions about COVID-19 among a convenience sample of the general public in the conducted on an online platform. The questionnaire consisted of 22 questions on knowledge and perceptions of COVID-19, including specific questions about "myths" or falsehoods listed on the World Health Organization's "myth busters" In conclusion, the general public in the United States and United Kingdom appeared to have important misconceptions about COVID-19.[21]

A cross sectional online survey was conducted using a semi-structured questionnaire using a non-probability snowball sampling technique among 662 samples to assess the knowledge, attitude, anxiety experience, and perceived mental healthcare need among adult Indian population during the COVID-19 pandemic. The result showed

that responders had a moderate level of knowledge about the COVID-19 infection and adequate knowledge about its preventive aspects. The attitude towards COVID-19 showed peoples' willingness to follow government guidelines on quarantine and social distancing. The anxiety levels identified in the study were high. More than 80 % of the people were preoccupied with the thoughts of COVID-19 and 72 % reported the need to use gloves, and sanitizers. In this study, sleep difficulties, paranoia about acquiring COVID-19 infection and distress related social media were reported in 12.5 %, 37.8 %, and 36.4 % participants respectively. The perceived mental healthcare need was seen in more than 80 % of participants. There is a need to intensify the awareness and address the mental health issues of people during this COVID-19 pandemic. [22]

A cross-sectional study was conducted in Saudi Arabia among 3388 participants to assess the knowledge, attitudes, and practices of the Saudi public, towards COVID-19, during the pandemic using an online self-reported questionnaire. To assess the differences in mean scores, and identify factors associated with knowledge, attitudes, and practices towards COVID-19, the data were run through univariate and multivariable regression analyses, respectively. The majority of the study participants were knowledgeable about COVID-19. The mean COVID-19 knowledge score was 17.96 (SD = 2.24, range: 3–22), indicating a high level of knowledge. The mean score for attitude was 28.23 (SD = 2.76, range: 6–30), indicating optimistic attitudes. The mean score for practices was 4.34 (SD = 0.87, range: 0–5), indicating good practices. However, the results showed that men have less knowledge, less optimistic attitudes, and less good practice towards COVID-19, than women. We also found that older adults are likely to have better knowledge and practices, than younger people.[23]

A cross sectional descriptive study was conducted in Jordan among a sample of medical students to assess knowledge, attitude, perceptions, and precautionary measures towards COVID-19. Participants were students enrolled in different levels of study at the six medical schools in Jordan. An online questionnaire which was posted on online platforms was used. The questionnaire consisted of four main sections: socio-demographics, sources of information, knowledge attitudes, and precautionary measures regarding COVID-19. In conclusion, Jordanian medical students showed good knowledge about the COVID-19 virus and implemented proper

strategies to prevent its spread.[24]

A cross sectional study was conducted in Bangladesh to assess the knowledge and attitude towards COVID-19: population-level estimation and a comparison. The method of data collection through the online and phone survey

methods. Data were collected through phone calls and online survey in Bangladesh. The result showed that percentages of good knowledge holders were 57.6%, 75.1%, and 95.8% in the phone (n= 1426), online non-medical (n= 1097), and online medical participants (n= 382), respectively. Comparison between phone and online survey showed that, overall, online survey might overestimate knowledge level than that of phone survey, although there was no difference for elderly, poor, and rural people. Male gender, higher education, living in town/urban areas, good financial condition, and use of internet were positively associated with good knowledge. However, higher knowledge was associated with having less confidence in the final control of COVID-19. Our adult population-level estimates showed that only 32.6% (95% CI 30.1-35.2%) had good knowledge.[25]

A cross sectional study to assess Knowledge, Concerns, and Behaviours' of Individuals During the First Week of the Coronavirus Disease 2019 Pandemic in Italy. The method of data collection is through, non probability survey study recruited adult participants with a snowball sampling method in any Italian region during the first week of the COVID-19 outbreak in Italy. The findings suggested that during the first week of the COVID-19 outbreak in Italy, people were well informed and had a relatively stable level of worries. Quality of life did not vary across the areas, although mental well-being was challenged by the social appraisal and worries related to the contagion. Increased scores for worries and concerns were associated with more

cognitive rigidity and emotional instability.[26]

A Cross sectional study to assess the knowledge, attitudes and perceptions towards COVID-19 vaccinations. The survey was conducted using a semi-structured and self-reported questionnaire containing informed consent along with four sections Multiple linear regression was performed to determine the variables predicting knowledge, and attitudes towards COVID-19 vaccinations. The findings reflected inadequate knowledge but more positive attitudes towards COVID-19 vaccine among the general population in Bangladesh. In order to improve knowledge, immediate health education programs need to be initiated before mass vaccination schedule.[27]

A cross sectional study was conducted in China to assess the Knowledge, Attitudes and Practices of COVID-19 among Quarantine Hotel Workers. The method of data collection through convenience sampling to collect samples from the quarantine hotel employees in Xiamen, Fujian Province, China, during the COVID-19 pandemics. The

participating staff came from seven hotels. The survey results provide a general outline of quarantine hotel workers' COVID-19 prevention practices, which can better prepare quarantine hoteliers when addressing future health crises. The results also highlight future targeted education and intervention for quarantine hotel workers in order to comply with pandemic control measures, such as providing staff with training in anti-epidemic and disinfection standards and implementing quarantine services.[28]

**Summary**

This chapter deals with the review of literature related to the knowledge of Post Covid 19 syndrome. It helped the researchers to gain knowledge on the significance of the problem and threw light on discussion aspect of the study.

# CHAPTER -3

# METHODOLOGY

Research methodologies are the techniques used to structure a study and to gather and analyse information relevant to a research question.[16]

This chapter deals with the methodology followed in the study and is discussed under the following headings: Research Approach, Research Design, Variables, Setting, Population, Sample and Sampling Technique, Development and Description of the tool, Scoring key, Pilot study, Collection and plan for data analysis.

**Research approach**

Research approach involves the description of the plan to investigate the phenomenon under study in a structured (quantitative), unstructured (qualitative) or a combination of the two methods (quantitative-qualitative integrated approach). Therefore, the approach helps to decide about the presence or absence as well as manipulation and control over variables. In addition, it also helps to identify the presence or absence of and comparison between groups.[17]

In this study quantitative research approach was used.

**Research design**

Research designs the overall plan for addressing a research question, including specifications for enhancing the study's integrity.[16]

In this study Cross Sectional Descriptive Survey research design was used.

**Purpose:** To assess the knowledge regarding post covid-19 syndrome among adults coming in . selected OPDs of Muthoot Health Care ,Kozhencherry.

↓

**Study setting:** Selected OPDs in Muthoot Health Care,Kozhencherry

↓

**Sampling Technique:** Convenience sampling

↓

**Sample and sampling size:** 150

↓

**Data collection Technique:** Structured knowledge questionnaire

↓

**Scoring:** Poor, Average, and Good level of knowledge

↓

**Data analysis and interpretation**

**Descriptive statistics:** Percentage, Frequency, Mean, Mean%, Standard deviation

**Inferential statistics:** Chi-square test

↓

**Discussion, Conclusion, Summary and Recommendations**

**Figure: 1 – Schematic representation of the study**.

**Setting of the study**

The physical location in which data collection takes place.[16]

This study was conducted in selected OPDs of Muthoot Health Care Kozhencherry, Pathanamthitta ,Kerala, with over 15 specialties and 9 super specialty medical services and a team of renowned specialists with decades of experience. With high quality health care their top priority MGM Muthoot Hospitals, Kozhencherry is the first NABH accredited hospital in central Travancore and one of the handfuls of NABH nursing excellence certified hospitals in the region.

**Population**

A population is the entire aggregation of the cases in which a researcher is interested .[16]

The population in this study was adults of age 19-59 years .

**Sample and sampling technique**

**Sample**

A part or subset of population selected to participate in research study.[17]

In this study the sample were adults from selected OPDs in Muthoot Health Care Kozhencherry.

**Sampling technique**

The process of selecting sample from the target population to represent the entire population.[17] In this study the sampling technique used was convenience sampling.

**Sampling criteria**

Selecting a portion of the population to represent the entire population.[17]

**Inclusion criteria**

In this study the inclusion criteria are:

- Adults (age – 19-59 years) in selected OPDs of Muthoot Health Care Kozhencherry
- Those who are able to read and write in English or Malayalam

**Exclusion criteria**

In this study exclusion criteria are:

- Those who are not willing to participate in the study.

**Tool or Instruments**

**Development / Selection of tool**

With the extensive review of literature and opinions from professional experts and guides a Structured Knowledge Questionnaire was developed to assess the knowledge regarding post covid-19 syndrome among general people.

**Description of the tool**

Description is the identification of the characteristics of nursing phenomena, or of the relationship among this phenomena.[17] The tools used in this study are; Tool I: Sociodemographic data ,Tool II: Structured knowledge questionnaire.

**Tool I: Sociodemographic data**

The investigator constructed this to collect the background data of the study subjects. It consists of data such as age, gender, type of family, educational status. occupation and income.

**Tool II: Structured knowledge questionnaire**

Structured knowledge questionnaire which includes 25 questions to assess the knowledge regarding Post Covid 19 syndrome. The correct response is given 1 score and for incorrect responses 0 score is given.

**Scoring key of knowledge regarding Post Covid 19 syndrome among adults.**

Section-I: Coding the socio-demographic variables.

Section-II: The structured knowledge questionnaire is scored by summing the scores for 25 questions. Each question is awarded a score of 1 for each correct response and 0 for wrong response. The maximum score is 25. The score was interpreted as follows:

**Table:1 – Scoring key of knowledge regarding Post Covid 19 syndrome among adults.**

| Level of knowledge | Score | Percentage |
|---|---|---|
| Poor knowledge | 0 - 12.5 | <50% |
| Average knowledge | 12.5 - 17.5 | 50- 75% |
| Good knowledge | 17.5 - 25 | >75% |

**Content validity**

Content validity may be defined as the extent to which an instrument's content adequately captures the construct - that is, whether an instrument has an appropriate sample of items for the construct being measured.[16]

Content validity of the tool was established by experts. the experts were requested to give their opinions and suggestions regarding the relevance of the topic for further modifications to improve the clarity and content of the items. The tool was based on suggestions given by experts from different department.

**Pilot study**

Study carried out at the end of the planning phase of the research in order to explore and test the research elements to make relevant modifications in research tools and methodology[16]

A pilot study was conducted at Muthoot Health care dermatology OPDs on 2nd December 2021.

The study was found to be feasible and practicable.

**Data collection process**

Data collection is gathering the address of a research problem.[17]

Adequate samples were identified, their willingness to participate in the study was assured. The questionnaire to assess the knowledge concerning the post-covid syndrome was distributed.

**Plan for data analysis**

Data analysis is the technique used to reduce, organize, and give meaning to the data. It involves contrasting and comparing the final data to determine what pattern, themes, or threads emerge.[17]

The data were collected from 150 samples from selected OPDs in Muthoot Health Care Kozhencherry using structured knowledge questionnaire and descriptive and inferential statistics were used to analyse and interpret the data collected from the samples. The data were analysed manually using MS Excel and SPSS 20th version.

# CHAPTER 4

ANALYSIS AND INTERPRETATION

This chapter presents the study results of statistical data analysis. Analysis is the method of organizing, sorting, and scrutinizing data in such a way that research question can be answered or meaningful inferences can be drawn.[17] The purpose of the study was to assess the knowledge regarding Post Covid -19 syndrome among adults and to find out the association between the knowledge score regarding Post Covid-19 syndrome among adults with selected demographic variables. The data were collected from 150 samples from selected OPDs using structured knowledge questionnaire keeping in view the objectives of the study, descriptive and inferential statistics were used to analyse and interpret the data collected from the samples. The data were analysed manually using MS Excel and SPSS 20$^{th}$ version.

Data analysis is condensed under the following headings.

Section I: Description of sociodemographic variables of adults.

Section II : Description of knowledge regarding Post Covid -19 syndrome among adults

Section III: Association of knowledge regarding Post Covid -19 syndrome with the selected demographic variables.

**Section 1: Description of socio demographic variables of adults**

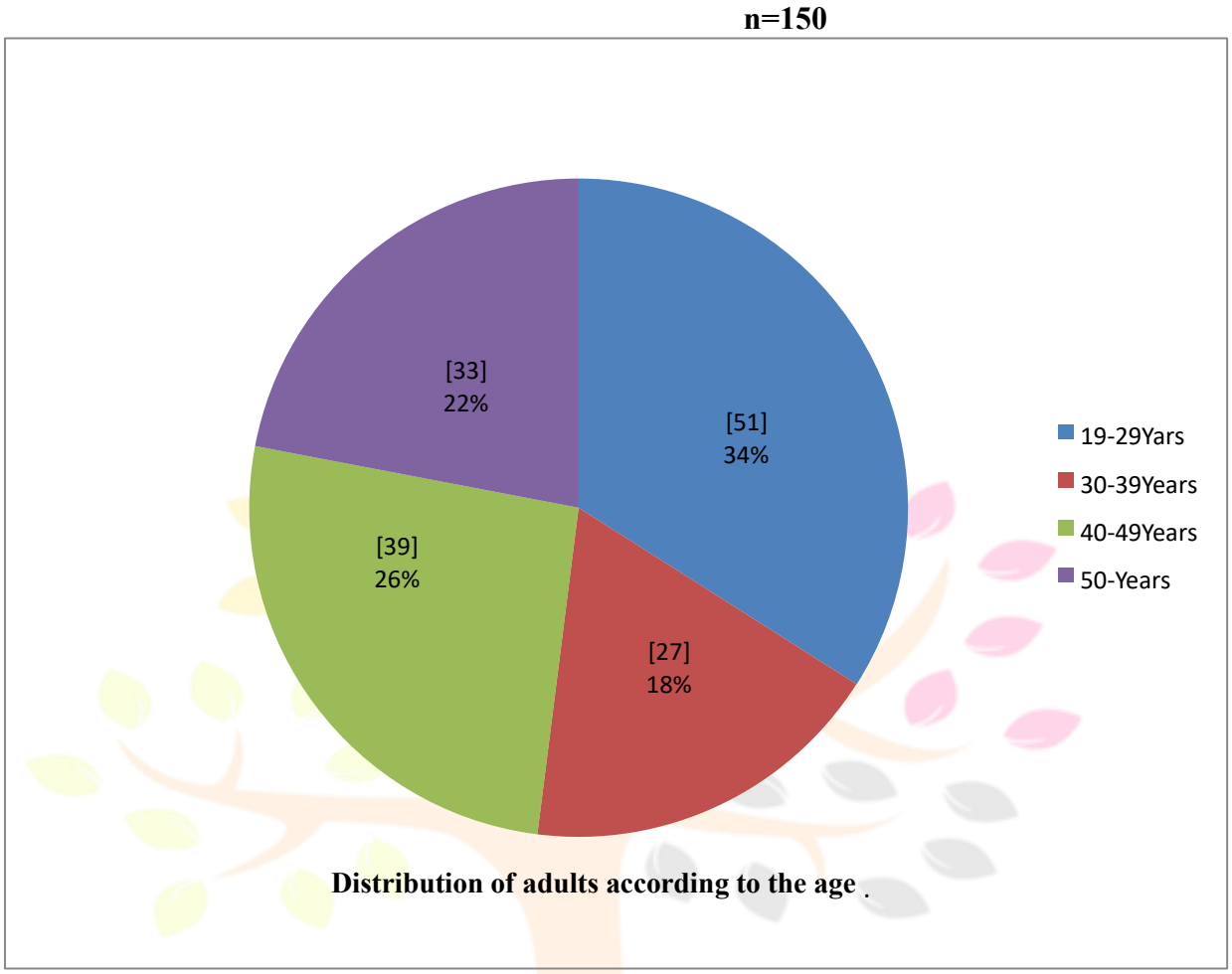


**Figure 2: A pie diagram showing distribution of adults according to their age.**

The data presented in the above pie diagram depicts that 51 (34%) of the samples were between 19- 29 years of age, 39 (26%) were between 40-49 years of age, 33 (22%) were between 50-59 years of age and 27 (18%) of the adults were between the age group 30-39 years of age.

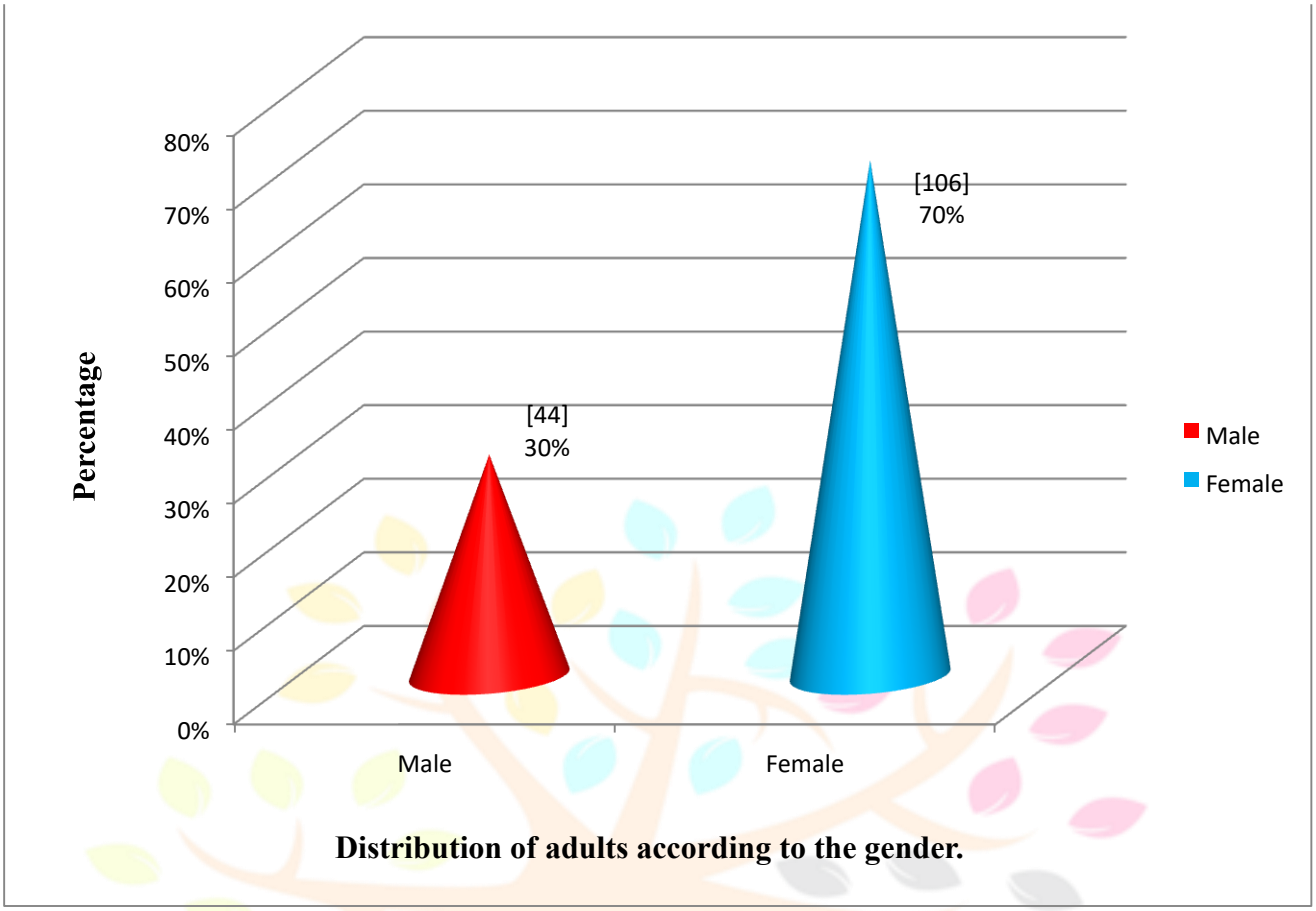


**Figure 3: A cone diagram showing distribution of adults based on their gender.**

The data present in the above conical diagram depicts that 106 (70%) subjects were females and 44 (30%) subjects were males**.**

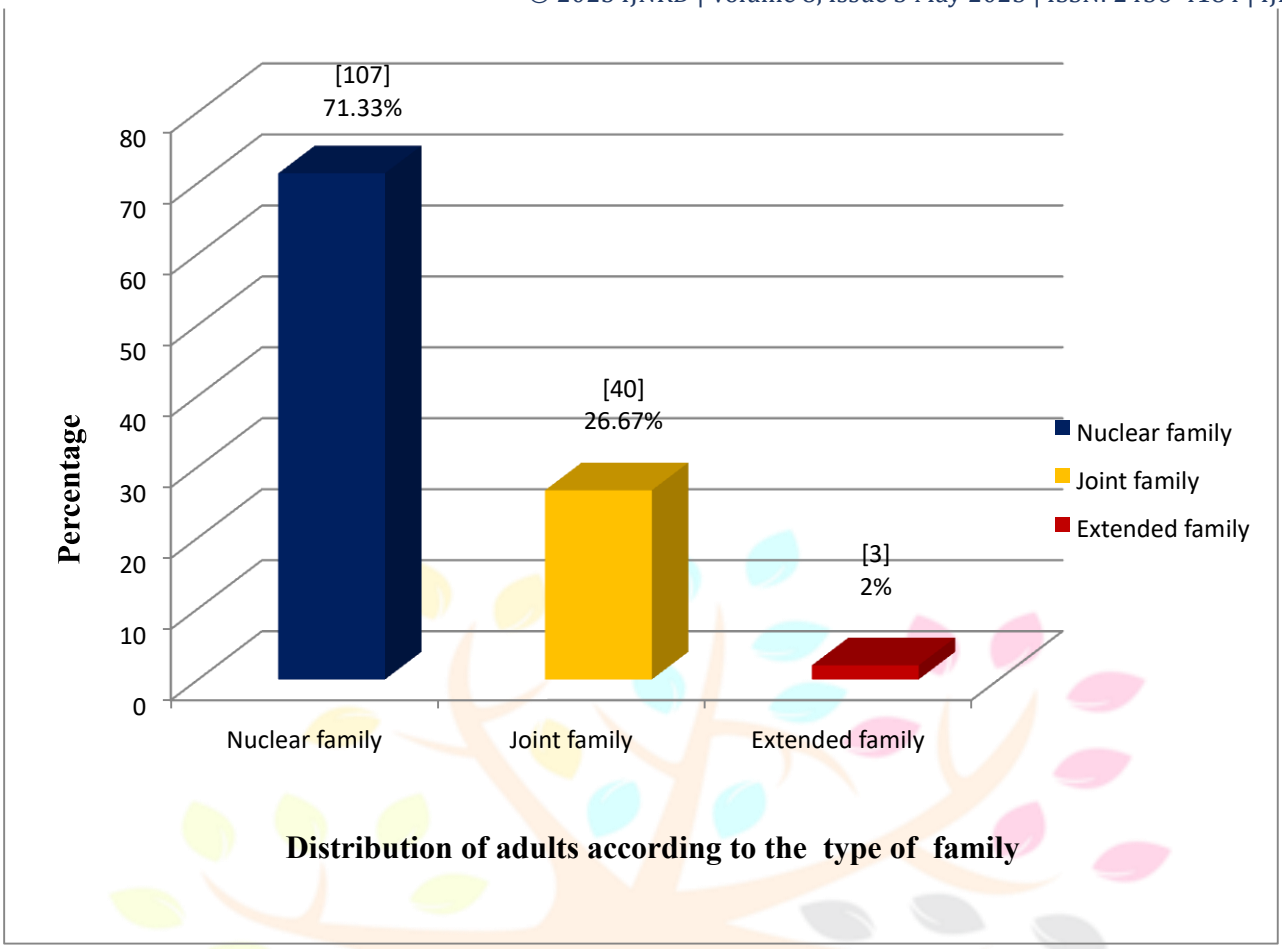


**Figure 4: A bar diagram showing distribution of adults based on the type of the family.**

The data present in the above bar diagram depicts 107 (71%) subjects belongs to nuclear family, 40 (27%) subjects belongs to joint family and only 3 (2%) subjects belongs to extended family.

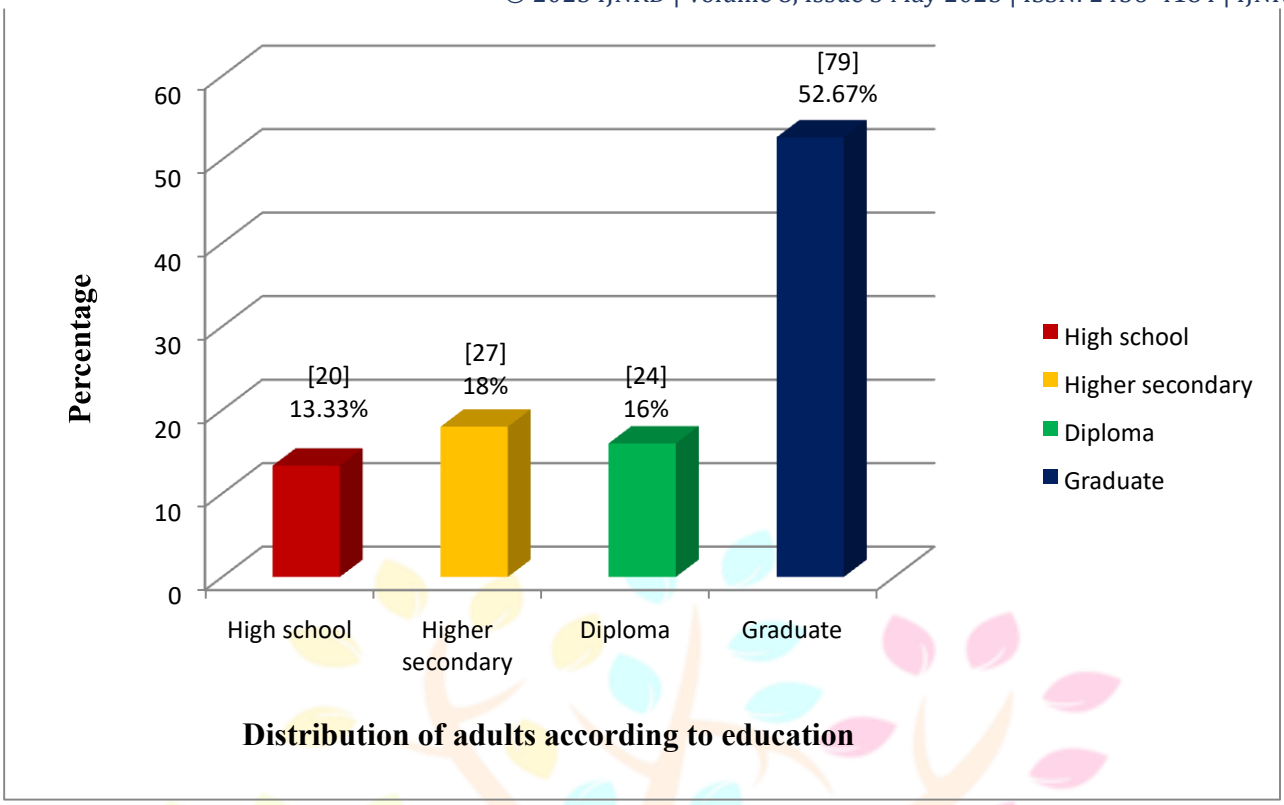


**Figure 5: A bar diagram showing distribution of adults based on the education.**

The data present in the above bar diagram depicts 20 (13%) subjects were educated up to high school, 27(18%) subjects were educated up to higher secondary, 24(16%) subjects were educated up to diploma and 79(53%) subjects were graduates.

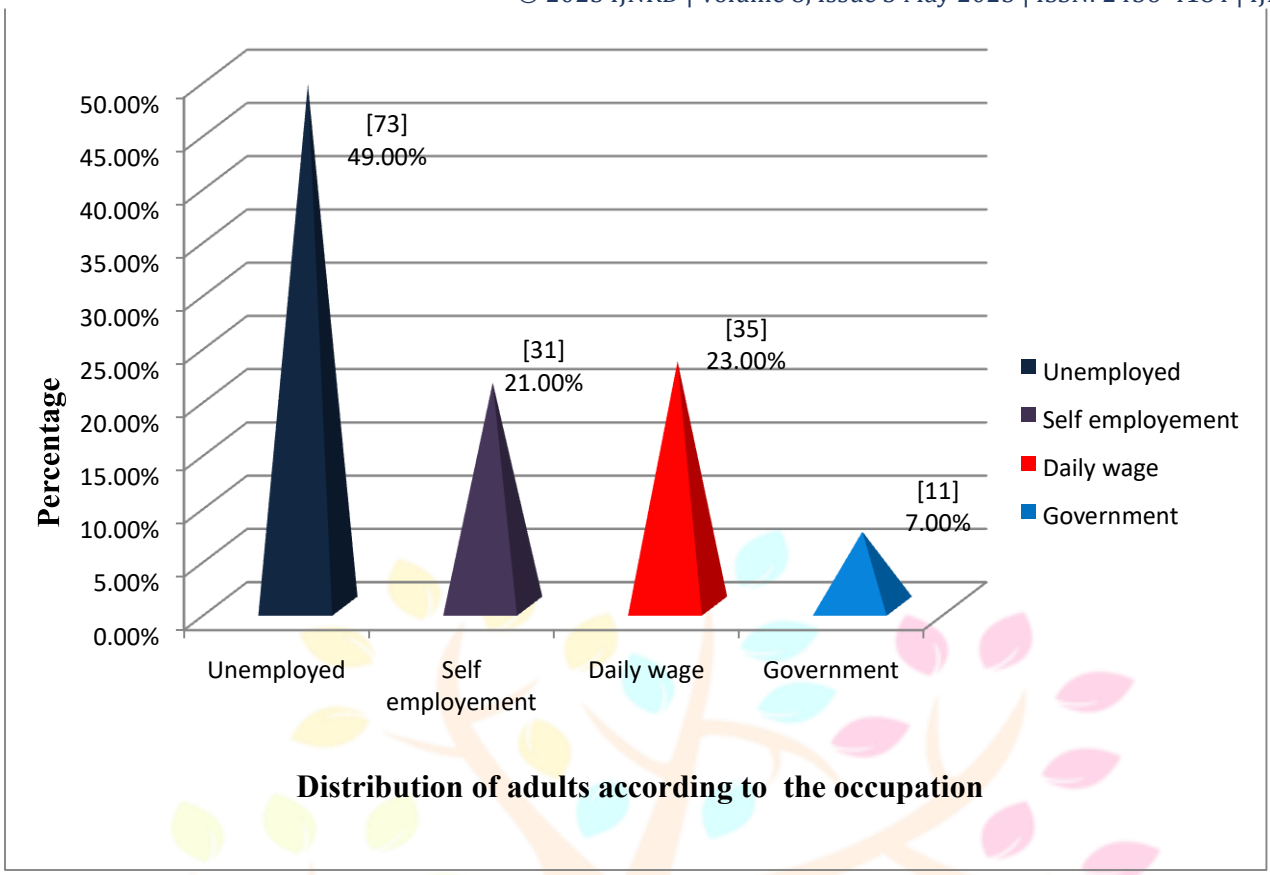


**Figure 6: A pyramidal diagram showing distribution of adults based on the occupation**

unemployed, 35 [ 23%] subjects were daily wagers, 31 [21%] were self-employed, only 11 [7%] The data present in the above pyramidal diagram depicts that 73 [49%] subjects were
subjects were government employees.

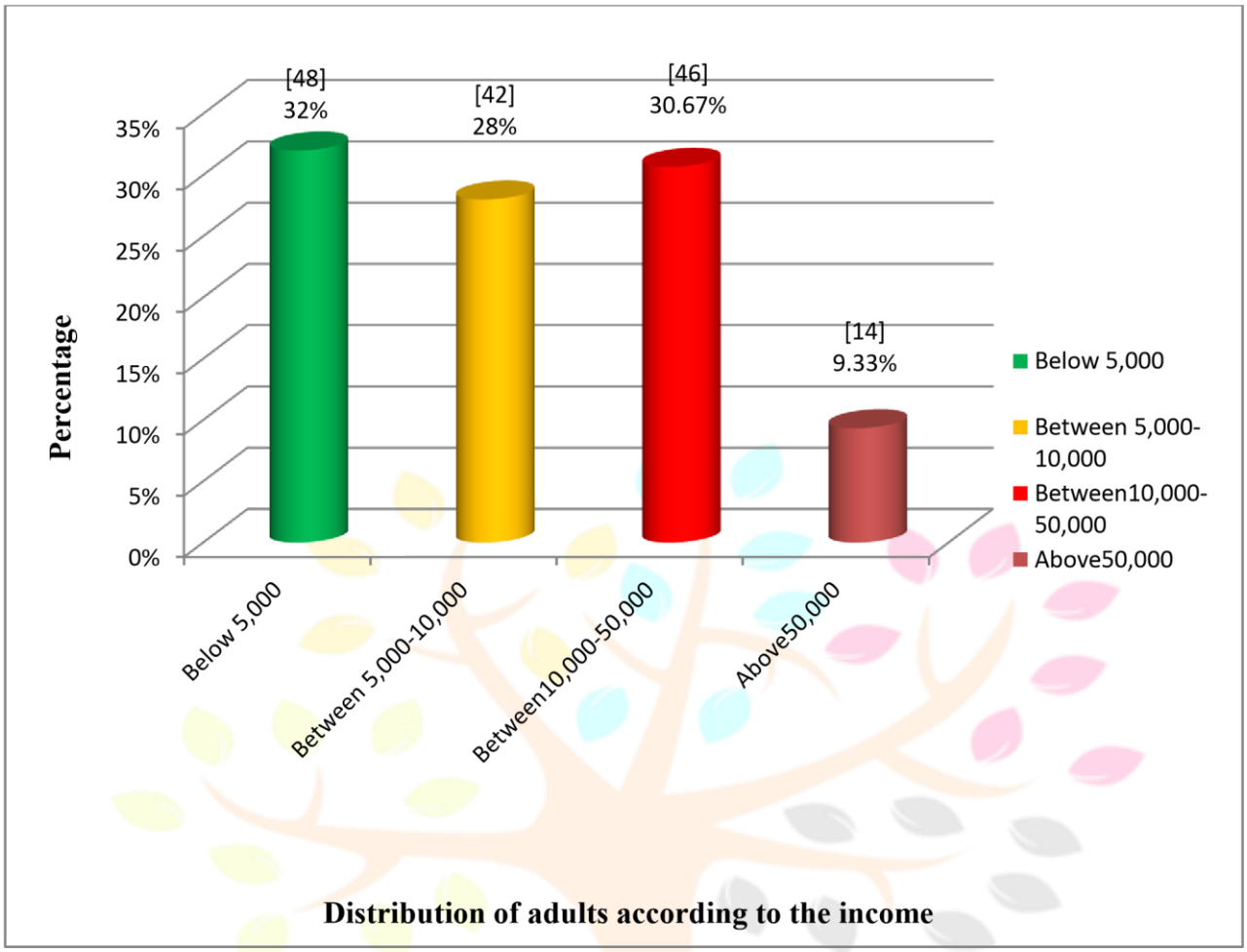


**Figure 7: A cylindrical diagram showing distribution of adults based on the income.**

The data present in the above cylindrical diagram depicts 48 [32%] subjects were having income below Rs.5000, 42 [28%] subjects were having income between Rs.5000-10000, 46 [30%] subjects were having income between Rs.10000-50000, 14 [9%] subjects were having income above Rs.50000.

**Section 2: Description of knowledge regarding Post Covid -19 syndrome among adults.**

**Table 2: Frequency and Percentage of adults according to the knowledge about Post Covid -19 syndrome.**

**n=150**

| Knowledge level | Frequency | Percentage |
|---|---|---|
| Poor knowledge | 19 | 13% |
| Average knowledge | 74 | 49% |
| Good knowledge | 57 | 38% |
| **TOTAL** | **150** | **100%** |

The data presented in table 2 depicts that 13% of the subjects have poor knowledge about Post Covid 19 syndrome, 49% of the subjects have an average knowledge about Post Covid 19 syndrome, 38% of the subjects have good knowledge about Post Covid 19 syndrome.

**Section 3: Association of knowledge regarding post covid 19 syndrome with selected demographic variables.**

**Table 3: Association of knowledge regarding Post Covid 19 syndrome with socio demographic variables of adults.**

| Demographic variables | Frequency(f) | Percentage(%) | chi square ($X^2$) |
|---|---|---|---|
| Age | | | |
| a)19-29years | 51 | 34 | |
| b) 30-39years | 27 | 18 | 7.3321 |
| c)40-49years | 39 | 26 | |
| d) 50-59 years | 33 | 22 | |
| Gender | | | |
| a)Males | 44 | 30 | 6.865* |
| b) Females | 106 | 70 | |

| | | | |
|---|---|---|---|
| Type of family | | | |
| a)Nuclear | 107 | 71 | |
| b) Joint | 40 | 27 | 2.356 |
| c)Extended | 3 | 2 | |
| Education | | | |
| a)High school | 20 | 13 | |
| b) Higher secondary | 27 | 18 | 2.943 |
| c)Diploma | 24 | 16 | |
| d) Degree | 79 | 53 | |
| Occupation | | | |
| a)Unemployed | 73 | 49 | |
| b) Self-employed | 31 | 21 | 13.6 |
| c)Daily wagers | 35 | 23 | |
| d) Government employee | 11 | 7 | |
| Income | | | |
| a)Below Rs.5,000 | 48 | 32 | |
| b) Between Rs.5,000-10,000 | 42 | 28 | 3.37 |
| c)Between Rs.10,000-50,000 | 46 | 31 | |
| d) Above Rs.50,000 | 14 | 9 | |

*P<0.05

The data presented in the above table shows that there is a significant association of knowledge regarding post covid 19 syndrome with the demographic variable gender, as the calculated chi square value is 6.865. No significant association was found with demographic variables like age, type of the family, education, occupation and income.

# CHAPTER -5

# RESULTS

This chapter deals with the objectives, assumptions and results of the study. The present study was conducted to assess the knowledge regarding Post Covid-19 syndrome among adults coming in selected OPDs in Muthoot health care Kozhencherry. The descriptions of results enable the researcher to reduce, summarize, organize, evaluate, interpret and communicate numerical information. The study was done to obtain a meaningful answer to the research problem under study, the data was processed and analysed in a systematic manner, so that patterns in relationships that exist between the data groups can be discerned.

**Objectives**

1.Assess the knowledge regarding Post Covid -19 syndrome among adults.

2.Find out the association between the knowledge score regarding Post Covid -19 syndrome among adults with selected demographic variables.

**Section I:** Description of socio demographic variables of adults.

**Section II:** Description of knowledge regarding Post Covid -19 syndrome among adults

**Section III:** Association of knowledge regarding Post Covid -19 syndrome with the selected demographic variables.

**Section I: Description of socio demographic characteristics of adults.**

1.Based on the age the majority of adults belong to 19 to 29 age group.

2.With reference to the gender 70.6 % were females and 29.3% were males.

3.With regard to the family of adults most of them (71.2%) belongs to nuclear family, 27% belongs to joint family and 2% belongs to extended family.

4.With regard to the education of the adults most of them 53% were graduates, 18% studied up to higher secondary, 16% studied up to diploma and 13% studied up to high school.

5.With regard to the occupation of the adults 49% were unemployed, 23% were daily wagers, 21% were self employed and 7% were government employees.

6.With regard to the income of the adults 32% were having an income below 5000, 30.67% were having an income between 5000 to 10000, 28% were having an income between 10000 to 50000, 9.33% were having an income above 50000.

**Section II: Description of knowledge regarding Post Covid -19 syndrome among adults.**

1.Out of 150 sample 19 (13%) of subjects were having poor knowledge regarding Post Covid 19 syndrome.

2.Out of 150 samples 74(49%) of subjects were having average knowledge regarding Post Covid 19 syndrome.

3.Among 150 samples 57(37%) of subjects were having good knowledge regarding Post Covid 19 syndrome.

**Section III: Association of knowledge regarding Post Covid 19 syndrome among the adults with the demographic variables.**

Chi square test was done to find out the association of knowledge regarding Post Covid 19 syndrome among the adults with the demographic variables. The result showed that there was a significant association between knowledge score and selected demographic variable, gender. The calculated Chi-square ($X^2$) value was greater than table value at 0.05 level of significance and there is no association between knowledge scores and selected demographic variables such as age, type of family, education, occupation and income.

# CHAPTER -6

DISCUSSION, SUMMARY AND CONCLUSION

## Discussion

This chapter presents the discussion of research results within the perspective of literature review and are organized by principle study concepts. The study limitations, nursing implications and recommendations are presented.

Present study was conducted to assess the knowledge regarding post covid syndrome among adults in selected OPDs at Muthoot health centre, Kozhencherry in order to achieve the objectives of the study. A Descriptive cross sectional survey design was adopted. Convenience sampling technique was used to select the sample. The data was collected from 150 adults from selected OPDs in Muthoot Health care Kozhencherry by structured knowledge questionnaire and was interpreted using the application of Chi square test.

The findings of the study have been discussed with reference to objectives, assumptions and findings of other related studies under the following headings:

**Section 1:** Discussion of socio demographic characteristics of adults.

**Section 2:** Discussion of assessment of knowledge regarding Post Covid -19 syndrome among adults

**Section 3:** Discussion of association between the knowledge score of adults with demographic variables

**Section 1:** Discussion of the socio demographic characteristics of the adults

Among 150 samples 51(34%) were in age group of 19-29 and 106(70%) were females. Out of 150 samples 107(71%) were from nuclear family and among the 150 samples 79(52.6%) we're graduate. The majority of the sample 73 (49%) oven unemployed. And the 48 (32%) were having income of below 5,000.

**Section 2:** Discussion of assessment of knowledge regarding post covid-19 syndrome among adults

The result of present study showed the about 38% had good knowledge about Post Covid – 19 syndrome, 49.3% had average knowledge and only 12.6% of the samples were having poor knowledge regarding Post Covid 19 Syndrome.

**Section 3:** Discussion of association between the knowledge score of adults with selected demographic variables

The finding of the study revealed that there was an association between the knowledge score of gender. But no association was found with age, family, education, occupation and income of the adult.

**Summary**

The study was conducted with the primary objective of assessment of knowledge regarding post covid-19 syndrome among adults coming in selected OPDs in Muthoot health care Kozhencherry. The research approach adopted for the study was quantitative approach with descriptive cross sectional survey design. The study was conducted at Muthoot health care Kozhencherry, Pathanamthitta District. The sample for the present study was selected by convenience sampling technique. The sample comprised of 150 adults who fulfilled inclusion criteria. The participants were asked to fill the socio demographic variables Proforma and structured knowledge questionnaire and anonymity was maintained. A pilot study was conducted at Muthoot Health care dermatology OPDs on 2 December 2021. The study was found to be feasible and practicable. The main study was conducted on 3rd December 2021 to 6th December 2021.The researchers applied Chi-square test to analyse the data.The study results revealed that among 150 samples 19 (12.67%) had poor knowledge, 74 (49.31.%) had average knowledge and 57 (35%) had good knowledge regarding post covid-19 Syndrome.

**Conclusion**

The study aimed at assessing the knowledge regarding Post Covid- 19 syndrome among adults coming in selected OPDs in Muthoot health care Kozhencherry to find out association between level of knowledge with selected socio demographic variables. The following conclusion were drawn on the basis of the findings of the study.

Among 150 samples 51(34%) were in the age group of 19-29, 27(18%) in 30-39 age group, 39(26%) in 40-49 age group and 33(22%) were included in the age group of 50-59

Majority of the samples 106(70%) were females and remaining 44(30%) were males. Out of 150 samples 107(71.3%) were from nuclear family, 40(26.6%) from joint family and3(2%) from the extended family.

Majority of the adults 79(52.6%) were graduates and remaining adults 20(13.3%) were educated up to high school, 27(18%) studied up to higher secondary, and 24(16%) studied up to diploma

Most of the samples 73(49%) were unemployed and the remaining sample 31(49%) were selfemployed, 35(23%) were daily wages and only 11(7%) were government employees.

Out of 150 samples 48(32%) having an income below 5000, 42(28%) having an income between 5,000-10,000. 46 (30.67%) were having an income between 10, 000-50,000 and 14 (9.3%) having an income above 50,000.

The results of the study revealed that 49.3% had the average knowledge, 38% had good knowledge and 12.67% had good knowledge and12. 67% had poor knowledge regarding the post covid-19 syndrome.

The result also showed that there was a significant association between the knowledge score and gender.

**Nursing implications**

The findings of the study have certain important implications in the nursing profession and in the field of nursing practice, nursing education, nursing administration & nursing research.

**Nursing practice**

➢ Nurses can use pamphlet, and the teaching module to provide the knowledge and further information regarding post covid 19 syndrome, it's course, facts and preventive measures

➢ Nurses can conduct awareness programmes regarding the problems of post covid -19 syndrome.

➢ Nurses can give health education which can be conducted at the OPDs to prevent the serious effects of the syndrome.

**Nursing education**

➢ The study helps to provide knowledge regarding Post – Covid -19 syndrome.

➢ Nurse educators can encourage the adults to gain knowledge's regarding Post Covid -19 syndrome.

➢ Nurse educators can encourage the adults to provide the knowledge regarding Post Covid-19 syndrome to other adults.

**Nursing administration**

➢ Nurse administrator can organize service education for nursing personnel regarding knowledge of Post Covid – 19 syndrome.

➢ Nurse administrator can encourage the nursing personnel to conduct studies related to Post Covid- 19 syndrome.

**Limitations**

➢ Generalization of the study was limited due to convenience sampling technique .

➢ Study was limited to the selected OPDs in Muthoot health care Kozhencherry.

**Recommendation**

➢ A similar study can be conducted with large sample .

➢ A similar study can be conducted in another community setting.

➢ A similar study can be conducted using video assisted teaching module.

➢ A comparative study can be conducted to assess the knowledge regarding Post Covid -19 syndrome and adult attitude towards Post Covid -19 syndrome.

## REFERENCE

1.Wikipedia Disease. Available form: https://en.m. wikipedia.org

2.World Health Organization. Health topics / Coronavirus disease (Covid 19) https:// www.who.int/ health topics /Coronavirus.

3.The Center for Disease Control. Post Covid Conditions updated September 16 2021. Available form :https://www.cdc.gov/Coronavirus / 2019-ncov/long term effects / index.html.

4.CDC- preventing chronic disease public health research, practice and policy (cited on December 9 2021) Available form : https://www.cdc.gov/pcd/index.htm.

5.Fong SJ, Nilanjan D, and Jyothimita C .An introduction to Covid-19.Nature publication group, artificial intelligence for corona virus outbreak cited by June 23 2020, available from: :https://www.ncbi.nlm.nih.gov.png.

6.CDC Severe Acute Respiratory Syndrome (SARS) updated December 6 2017 available from: https:www.cdc.gov.sars.

7.Corona virus disease 2019 (Covid-19) Mayoclinic. Mayo foundation for medical education and research;2021Availableformhttps://www.mayoclinic.org/ disease conditions / Coronavirus / symptoms – causes / syc – 20479963.

8.Covid-19 pandemic in India Wikipedia. Wikipedia foundation; 2021. Available form: https://en. m. wikipedia. org / wiki / Covid 19 pandemic in India.

9.8.Vichipsa, Aleem A, Anjum F Post acute corona virus syndrome. Available form : https://ncbi.nlm.nih.gov .

10. Post Covid -19 condition (long Covid ). World Health Organization. World Health Organization; Available form :https://www.who.int / srilanka /news / detail / 16-10-2021- post Covid -19 condition. -WHO, post Covid 19 condition, news release updated on 16 October 2021.

11. 10.Oschar Moreno – Pirez, Esperanza Merino Jose- Manuel Leon- Ramiriz, Marino Andrew. Post acute Covid 19 syndrome incidence and risk factors cited by 181.

12. ncbi.n/m.nih.go M. Agustin, P S Chommas, M. Sfecha, F. Revald post Covid syndrome in non hospitalized patients with Covid 19 a longitudinal prospective cohort study. The Lenert Regional… 2021 Elseiver cited by 60.

13. 12.https://www.statisfica.com/ satisfical 1111696 / Covid 19 lases. P/o by court. Distribution of Covid 19 cases worldwide as of Nov 24, 2021 published by John Elflern, November 24,2021.

14. 13.Taquet M. Dirco Q, Luciano, goddess J R, Eyal ( 28 sep 2021) Incidence, co occurance and evolution of long Covid fracture.

15. Nalbandian A,Idhgal K, and Wan T E . Natural medicine – post acute covid 19 syndrome ( cited 2021 March 22). Available from www.nature .com.

16. Kayaaslan B, Eser F, Kalam K A, Kava G, Kaplan B, and Imran K R. Post covid syndrome;a single centered -questionnaire study on 1007 participants recovered from covid 19.(cited by 2021) available from ncbi.nlm.nih.gov.

17. 16.Polit F D,Beck TC Nursing Research generating and assessing evidence for nursing practice.southasian edition 11th edition Wolters Kluwer publication.

18. 17.Sharma K S Nursing Research and statistics 2nd edition elsevier publication.

19. 18.Say D,Crawford N, McNab.S,Wurzel D ,Steer A,Tosif.S . Post Covid-19 outcomes in childrn with mild and asymptomatic disease.

20. 19.Dennis A, Wamil M, Albert J, Oben J, Cuthbertson J, Wootton D, Gooks M, Gabbay M, Brady M, Hishmeh L, Attree E and Heightman M. Multiorgan impairment in low risk individuals with post covid 19 syndrome.(cited 2021)

21. Pal.R , Yadav.U , Grover .S , Saboo.B,Verma.A, Bhadada.K.S. Knowledge, attitudes and practices towards Covid-19 among young adults with Type1 Diabetes mellitus amid the nationwide lockdown in India.

22. 21.Gao.H,Hu.R,Yin.L,Yuan.X,Tang.H,Luo.L,Chen.M,Huang D,Wang Y. Knowledge, attitudes and practices of the Chinese public with respect to Corona virus disease.

23. Priego G.A.B, Romero T.A, Galvez P.M.S, Duran C. Anxiety, depression, attitudes and internet addiction during the initial phase of the 2019 Corona virus disease epidemic.

24. Al-Hanawi. K.M, Angawi.K,Oattan .A,Alshareef. N,Yasmin, Helmy Z.H. Knowledge, attitudes and practices toward Covid-19 among the public in the kingdom of Saudi Arabia.

25. 24) Khasawneb.I.A,Humeidan.A.A,Alsulaiman W J, Bloukh.S, Ramadan M.Medical students and COVID - 19: Knowledge, attitudes and precautionary measures.

26. 25.Kareem A, Akter M, Mazid T, Pulock S O, Aziz Y Y, Hayee S, Tamanna N, Haque A, Rashid H, Kumar A, Das A and Majumder K. Knowledge and attitude towards covid 19 in Bangladesh population- level estimation and comparison of data(cited 2020).

27. Panini F, Bomana A, Tagliabue S, Balconi M, Berlolotti M, Confalonieri E, Dio D C, Gilli G, Grafigna,Regalia C, Saila E and Villani D. Knowledge, concerns and behaviours of individual during the first week of corona virus disease ( cited 2019).

28. 27.Islam S M, Siddique B A, Akter R, Tosnim R, Ward R P,and Sikdes T. Knowledge, attitude and perception towards covid 19 vaccination (cited 2021)

29. Teng MV, Wu SK, Dan X W, Assessing the knowledge, attitude and practice of covid 19 among quarantine hostel workers in China (cited 2021).

# APPENDIX

## APPENDIX-A LETTER SEEKING FOR EXPERT OPINION AND SUGGESTIONS FOR THE CONTENT VALIDITY OF THE TOOL

From,

III Year B.Sc. Nursing ,

MGM Muthoot College of Nursing

Kozhencherry

Pathanamthitta

To,

Subject: Request for expert opinion and suggestions to establish content validity of research tool

Respected Sir/ Madam,

We the III$^{rd}$year B.Sc.Nursing students of MGM Muthoot College of Nursing, Kozhencherry have selected the following topic for research to be submitted as partial fulfilment of the requirement for B.Sc.Nursing Programme.

Topic: post covid-19 syndrome

We request you to go through the items and give your valuable suggestions and opinions to validate the tool.Your suggestion will be extremely helpful for us to refine the research study.we have attached the details of our study along with the research tool.

Thanking you

Your sincerely

III year B.Sc. Nursing

Place: Kozhencherry Date:

Here with we have enclosed,

1.Acceptance from for tool validation
2.Title of the study, statement of the problem, objectives of the study, operational definition and assumptions.
3.Tool-Baseline variables, structured knowledge questionnaire.
4.Criteria for validating the tool.
5.Tool validating certificate

## APPENDIX-B ACCEPTANCE FORM FOR TOOL VALIDATION

Name: ……..……..…

Designation: ……..…

Name of the College/ Hospital/ Institution:

……..……..…

**Statement of acceptance or non-acceptance**

I give my acceptance/ non- acceptance to validate the tool.

**Title of the study:** "A Cross Sectional Descriptive Survey to Assess Inpatient Perception on Quality Nursing Care in a Selected Hospital, Pathanamthitta District".

Place:

Date:

Signature

## APPENDIX-C LIST OF EXPERTS FOR CONTENT VALIDATION OF RESEARCH TOOLS

1.MRS. SIBI. P VARGHEESE

PROFESSOR, OBSTETRICS AND GYNECOLOGY NURSING

MGM MUTHOOT COLLEGE OF NURSING

KOZHENCHERRY

2.MRS. ANNA SAMUEL

PROFESSOR, FOUNDATIONS OF NURSING

MGM MUTHOOT COLLEGE OF NURSING

KOZHENCHERRY

3., MR. SKARIAH KOSHY

PROFESSOR , MENTAL HEALTH NURSING

MGM MUTHOOT COLLEGE OF NURSING

KOZHENCHERRY

4., MRS.MANGALAYA A R

ASSISTANT PROFESSOR, CHILD HEALTH NURSING

MGM MUTHOOT COLLEGE OF NURSING

KOZHENCHERRY

5. MRS. LIGI RACHEL DANIEL

ASSISTANT PROFESSOR , MEDICAL SURGICAL NRSING

MGM MUTHOOT COLLEGE OF NURSING

KOZHENCHERRY

## APPENDIX-D CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the tool of third group of 3rdyear B.Sc. Nursing students of M.G.M Muthoot College of Nursing, Kozhencherry who had undertaken the study on" **A STUDY TO ASSESS THE KNOWLEDGE REGARDING POST COVID-19 SYNDROME AMONG ADULTS COMING IN SELECTED OPDS IN MUTHOOT HOSPITAL KOZHENCHERRY"**

Place:

Date:

Signature of the expert:

Designation:

## APPENDIX-G CERTIFICATE BY THE STATISTICIAN

### To whom so ever it may concern

I here by certify that statistical calculation of the project entitled "**A STUDY TO ASSESS THE KNOWLEDGE REGARDING POST COVID-19 SYNDROME AMONG ADULTS RESIDING IN SELECTED AREAS IN KOZHENCHERRY"** by III year Bsc. Nursing students of MGM Muthoot College of Nursing, kozhencherry was done under guidance.

Signature

Name:

Place:

Date:

## APPENDIX-H CERTIFICATE FOR EDITING

This is certificate that the thesis work **"A STUDY TO ASSESS THE KNOWLEDGE REGARDING POST COVID -19 SYNDROME AMONG ADULTS COMING IN SELECTED OPDS IN MUTHOOT HEALTH CARE KOZHENCHERRY"** done by III YEAR B.Sc. Nursing students in MGM Muthoot College of Nursing has been edited for English language appropriateness.

**Date:**

**Place:**

**Signature:**

**Name:**

## APPENDIX -I

## TOOL USED FOR THE STUDY

## SECTION -A

## TOOL: 1 BASELINE VARIABLE PROFORMA

**General instructions to the sample** a) Read the questions carefully

b) Put tick mark for the appropriate response

1) Age:

a )19-29 years

b) 30-39 years

c)40-49years d ) 50-59 years

3) Gender: a) Male

b) Female

4) Types of family: a) Nuclear family

b) Joint family

c)Extended families

6) Educational status: a) High school

b)Higher Secondary

c)Diploma

d)Degree

7) Occupation:

a)Unemployed

b) Self employed

c)Daily wagers

d) Government employee

e)Agriculture

8)Family income:

a)Below Rs.5000

b) Between Rs.5000-1000

c)Between Rs.10000 -50000

d) Above Rs.50000 **SECTION -B**

**STRUCTURED KNOWLEDGE QUESTIONNAIRE**

1) Where was COVID-19 first reported? a) India

b) Russia

c)Pakistan

d) China

2) Which among the following is the cause of COVID-19? a) Virus

b) Bacteria

c)Fungal

d) Protozoal

3) Which is the mode of transmission of Covid - 19? a) Droplet

b) Close contact

c)Air borne

d) Contaminated objects

4) Which is the most accurate test for Covid -19? a) Antigen

b) RT-PCR

c)Widal

d) ELISA

5) How long does it take for symptoms of Covid-19 to appear? a)5-6 days

b) 2-4 days

c)8-10 days

d) 12-14 days

6) Which is the major respiratory complication associated with covid-19?

a)Pneumonia
b) Lung cancer
c)Acute kidney injury
d) Brain tumor

7) Which organ is mostly affected by covid-19?

a)Kidney
b) Lungs
c)Heart
d) Stomach

8) What is post Covid -19 syndrome?

a)Symptoms that occur before Covid-19 infection

b) Symptoms that occur during Covid-19 infection which may last for 10-14 days

c)Symptoms that may occur in individuals with history of Covid-19 infection which last for about 3 months

e) None of the above

9) What are the other names for Post Covid-19 Syndrome? a) Long Covid

b) Post acute Covid

c)Long haul Covid

d) All of the above

10) Which are the common neurological issues that occurs in the post Covid period? a) Headache, sensory loss, memory loss, cognitive impairment,

b) Paralysis, paraesthesia, loss of consciousness

c)Seizure, Parkinsonism, cerebrovascular disease

d) Altered level of consciousness, seizure, coma

11) What is the precaution that must be taken after Covid197 a) Breathing and coughing exercise using spirometer

b) Drinking tulasi water

c)Hanging neem leaves in front of house

d) Take rest

12) What is the meaning of Multisystem Inflammatory Disorders? a) ls a serious condition that appears to be linked to Covid-19

b) ls a mild infection

c)Disease in which no treatment is present

d) Disease not affecting vital organs

13) How long does the post COVID symptoms persist? a) 7days

b) 10days

c)3 month

d) 1 year

14) How long can immunity last after covid-19 infections? a) 3-4 months

b) 7-8 months

c)14-16 months

d) 1 year and above

15) Which among the following are the symptoms that may persist in patients with post acute COVID-19 syndrome?

a)Fatigue, shortness of breath, cough

b) Diarrhoea, giddiness, vomiting

c)Eye rash, chills, itching

d) Yellow discoloration, edema

16) Which is the risk group for post-covid syndrome ? a) 18-50yrs

b) >60yrs

c)<10yrs

d) Any age group

17) What are the common possible complications after recovering from Covid- 19? a) Fatigue, body ache,cough, sore throat, shortness of breath, clot formation

b) Diarrhoea, nausea, vomiting,blackstool, sleeplessness, skin rashes

c)Decreased urine output,rashes, constipation, hemetemesis

d) Pruritis, abdominal pain,headache, constipation, sleeplessness

18) What is the name given for a person suffering from post covid syndrome?

A) Longhaul

b) Pink buffer

c)Bluebloaters d ) Anaemic.

19) What is the reason for post-covid syndrome? a) Unknown

b) Alcohol

c)Antibodies

d) Smoking

20) Which is the test that must be done in patient above 25year of age after covid -19? a) D-dimer test

b) LFT

c)RFT

d) Creatinine enzymatic

21) What is the purpose of D-dimer test? a) To test Covid-19

b) To find blood clotting after Covid-19

c)To identify myocardial function

d) To know the blood count

22) What is the time period between vaccinations if you are affected with Covid-19? a) 3 months

b) 9 months

c)20 days

d) 6 months

23) What is the effects of Covid-19 pandemic on mental health? a) Depression

b) Dementia

c)Fear

d) Anxiety

24) Which are vaccines available against covid-19 in Kerala? a) Covax and Covishield

b) Sputnik and Moderna

c)Astrazeneca

d) Pfizer

25) What are the major cardiac complications in patient with Covid-19? a) Heart failure

b) Hematuria

c)Epistaxis

d) Parasthesia

**ANSWER KEY**

1) d

2) a

3) a

4) b

5) d

6) a

7) b

8) c

9) d

10) a

11) a

12) a

13) c

14) a

15) a

16) d

17) a

18) a

19) a

20) a

21) b

22) a

23) a

24) a

25) a

**PART -A**

## അടിസ്ഥാനവിവരങ്ങൾ

നിർദ്ദേശങ്ങൾ

- ശ്രശദ്ധദ്ദയോശ്ശെ ദ്ദ ോദ്യങ്ങൾ വോയിക്കുക
- ഏറ്റവും അനുദ്ദയോജ്യമോയ ഉത്തരും തിരശ്ശെ ുത്തു അതിനു ദ്ദനശ്ര ✓ ഇുക

1.വയസ്സ്

a)19-29 വയസ്സ്

b) 30-39 വയസ്സ്

c)40-49 വയസ്സ്

d) 50-59 വയസ്സ്

2.ലിുംഗും

a)പുരുഷൻ

b) സ്ത്രീ

3.കുെുുംബും

a)അണുകുെുുംബും

b) കൂട്ടുകുെുുംബും

c)വിസ്തൃതമോയ കുെുുംബും

4.വിദ്യോഭ്യോസ ദ്ദയോഗയത

a)ഹൈസ്കൂൾ

b) ൈയർസ്സക്കൻഡറി

c)ഡിദ്ദലോമ

d) ബിരുദ്ുംം

5.ശ്തോഴിൽ

a)ദ്ജ്ോലിയിലല

b) സവയും ശ്തോഴിൽ

c)ദ്ിവസദ്വതന ശ്തോഴിൽ

d) ഗവൺശ്മന്റ് ദ്ജ്ോലി

e)കൃഷിപ്പണി

6.വരുമോനും

a)5000 രൂപയിൽ തോശ്ഴ

b) 5000-10000 രൂപ c) 10000-50000 രൂപ

d) 50000 രൂപയ്ക്ക് മുകളിൽ

**PART-B**

1.ദ്കോവിഡ്- 19 ന്റശ്റ ഉത്ഭവും എവിശ്ൊ?

a)ഇന്ത്യ

b) റഷയ

c)പോകിസ്ഥാൻ

d) ഹ ന

2.ദ്കോവിഡ്-19 അണുബോധയുശ്ൊ കോരണും എന്ത്?

a)ഹവറസ്ക

b) ബോക്ൊീരിയ

c)ഫുംഗസ്ക

d) ദ്രപോദ്ട്ടോദ്സോവ

3.ദ്കോവിഡ്-19 പകരുന്ന വിധും?

a)വോയുവിലൂശ്ൊ

b) മലിനമോയ വസ്തുക്കളിലൂശ്ൈ

c)ജ്ഞത്തിലൂശ്ൈ

d) ഭ്ക്ഷണത്തിലൂശ്ൈ

4.ദ്യകോവിഡ് -19 കണ്ടു പിൈിക്കോനുള്ള ക്യതയമോയ പരിദ്യശോധന ഏത്?

a)ആന്റിറിജ്ൻ പരിദ്യശോധന

b) ആർ.ൈി. പി. സി.ആർ

c)ഹവഡൽ ശ്ൈസ്റ്റ്

d) എഹലസ പരിദ്യശോധന

5.എരത നോളുകൾക്കു ദ്യശഷമോണ് ദ്യകോവിഡ് ലക്ഷണങ്ങൾ രപതയക്ഷശ്പ്പെുന്നത്?

a)5 -6 ദ്ിവസങ്ങൾ

b) 2-4 ദ്ിവസങ്ങൾ

c)8-10 ദ്ിവസങ്ങൾ

d) 12-14 ദ്ിവസങ്ങൾ

6.ദ്യകോവിഡ്-19ൽ ഉണ്ടോകുന്ന ശവോസദ്യകോശ സങ്കീർണ്ണത ഏതു?

a)നയൂദ്യമോണിയ

b) ശവോസദ്യകോശ അർബുദ്ുംം

c)വ്യക്കയുശ്ൈ തകരോർ

d) തലദ്യചോറിശ്ല മുഴകൾ

7.ദ്യകോവിഡ് ബോധിക്കുന്ന രപധോന അവയവും ഏത്?

a)വ്യക്ക

b) ശവോസദ്യകോശും

c)ൈൃദ്യും

d) ആമോശയും

8.എന്ത്ോണ് ദ്യപോസ്റ്റ് ദ്യകോവിഡ് സിുംപ്റ്റ്റും?

a)ദ്യകോവിഡ് 19 അണുബോധയ്ക്കു മുൻപ്റ് ഉണ്ടോകുന്ന ലക്ഷണങ്ങൾ

b) ദ്യകോവിഡ് 19 അണുബോധക്ക് ഒപ്പും ഉണ്ടോകുന്ന 10 മുതൽ 14 ദ്ിവസും നീണ്ടു നിൽക്കുന്ന ലക്ഷ്ണങ്ങൾ

c)ദ്യകോവിഡ്-19 അണുബോധ വന്നവർക്ക് ഉണ്ടോകുന്ന 3 മുതൽ

4 ആഴ് നിലനിൽക്കുന്ന ലക്ഷണങ്ങൾ

d) ഇവശ്യോന്നുമലല

9.ദ്യപോസ്റ്റ് ദ്യകോവിഡ് സിൻദ്രഡോമിശ്ന മറ്റു ദ്യപരുകൾ ഏശ്ലലലോും?

a)ദ്യലോങ്ങ് ദ്യകോവിഡ്

b) ദ്യപോസ്റ്റ് അകയൂട്ട് ദ്യകോവിഡ്

c)ദ്യലോങ്ങ് ദ്യൈോൾ ദ്യകോവിഡ്

d) ഇവശ്യലലോും

10.ദ്യപോസ്റ്റ് ദ്യകോവിഡ് സിൻദ്രഡോും ഉണ്ടോകുന്നവരിൽ കോണശ്പ്പുന്ന രപധോനശ്പ്പട്ട നോഡീവയവസ്ഥശ്യ ബോധിക്കുന്ന ലക്ഷണങ്ങൾ ഏശ്തോശ്ക്ക?

a)തലദ്യവദ്ന, ലന വയതിയോനങ്ങൾ,മറവി, മണും ഇലലോയ്ക്ക്മ, രു ിയിലലോയ്ക്ക്മ തലദ്യചോറിശ്ല രപവർത്തനത്തിൽ ഉണ്ടോകുന്ന രപശ്നങ്ങൾ

b) ദ്യബോധക്ഷയും, പക്ഷോഘോതും, തരിപ്പ് ദ്യകോമ

c)അപസ്മ്മോരും പോർക്കിൻദ്യസോണിസും തലദ്യചോറിശ്ല രക്തധമനികളിൽ ഉണ്ടോകുന്ന രപശ്നങ്ങൾ

d) ദ്യബോധ കുറവ് അപസ്മ്മോരും ദ്യകോമ

കോവിഡ് 19 വന്നതിനുദ്യശഷും എെുദ്യക്കണ്ട മുൻകരുതലുകൾ എശ്ന്ത്ോശ്ക്ക?

a)ുമയുശ്ൊ ശവോസദ്യകോശശ്ത്തയുും വയോയോമും ശ് യ്യുക

b) തുളസി ശ്വള്ളും കുെിക്കുക

c)വീെിനു മുന്നിൽ ദ്യവപ്പില തൂക്കിയിെുക

d) വിരശമിക്കുക

11.മൾട്ടി സിസ്റ്റും ഇൻഫ്ളദ്ദമറ്ററി ഡിദ്ദസോഡർ എന്നോൽ എന്ത്?

a)ദ്ദകോവിഡ്-19 അണുബോധശ്ക്കോപ്പും ഉണ്ടോകുന്ന വളശ്ര ഗുരുതരമോയ ദ്ദരോഗും

b) ശ് റിയ അണുബോധ

c)ികിത്സ ലഭ്യമലോല ത്ത ഒരു അസുഖും

d) രപധോന അവയവങ്ങശ്ള ബോധിക്കോത്ത ദ്ദരോഗങ്ങശ്

12.ദ്ദപോസ്റ്റ് ദ്ദകോവിഡ് സിൻദ്ദരഡോും എരതനോശ് നിലനിൽക്കും?

a)7 ദ്ിവസും

b) 10 -12 ദ്ിവസും

c)2-3 ആഴ്

d) 1 വർഷും

13.ദ്ദകോവിഡ് വന്നതിനു ദ്ദശഷും ലഭ്ിക്കുന്ന രപതിദ്ദരോധദ്ദശഷി എരതനോശ് നിലനിൽക്കും?

a)3- 4 മോസും

b) 7-8 മോസും

c)14-16 മോസും

d) 1 വർഷത്തിന്റ മുകളിൽ

15.ദ്ദപോസ്റ്റ് ദ്ദകോവിഡ് സിൻദ്ദരഡോമിൽ ഉണ്ടോകുന്ന ലക്ഷണങ്ങശ് എശ്ന്ത്ോശ്ക്ക ?

a)ക്ഷീണും, ശവോസുംമുട്ടൽ, ുമ

b) ഛർോി ,വയറിളക്കും, തലകറക്കും

c)വിറയൽ, ശ് ോറിചിൽ, ഛർദ്ിി

d) നീര് ,ശരീരത്തിൽ മെനിറും

16.ദ്ദപോസ്റ്റ് ദ്ദകോവിഡ് സിൻദ്ദരഡോും ഉണ്ടോകോനുള്ള സോധയത ആരിൽ ആണ് കൂെുതൽ?

a)18-50 വയസ്സ്

b) 60 വയസ്സിനുമുകളിൽ

c)10 വയസ്സിനു തോശ്ഴയുള്ളവരിൽ

d)ഏത് രപോയത്തിലും

ദ്യകോവിഡ് 19 ന്റ ദ്യശഷും ഉണ്ടോകുന്ന സങ്കീർണ്ണതകൾ എശ്ന്ത്ോശ്ക്ക?

d) ക്ഷീണും, ശരീരദ്യവദ്ധ , ുമ, ശവോസതെസ്സും

e)ഛർോി ,വയറിളക്കും, കറുത്ത നിറത്തിലുള്ള മലും

f) ശ് ോറിചിൽ, തല ുറ്റൽ ,മറവി

g) വയറു ദ്യവദ്ധ, ശ് ോറിചിൽ, തലദ്യവദ്ധ

ദ്യപോസ്റ്റ് ദ്യകോവിഡ് സിൻദ്യരഡോും ഉള്ളവശ്ര വിളിക്കുന്ന ദ്യപശ്രന്ത്് ?

h) ദ്യലോങ്ങ് ദ്യെദ്യോൾ

i) പിങ്ക് ബഫർ

c)ബ്ലൂ ദ്യബ്ലോദ്യട്ടഴ്സ്ത

d) അനീമിക്

17.ദ്യപോസ്റ്റ് ദ്യകോവിഡ് സിൻദ്യരഡോും വരോനുള്ള കോരണും എന്ത്്?

a)യഥോർത്ഥ കോരണും കണ്ടുപിോിചിട്ടിലല

b) മദ്യപോനും

c)ആന്ററിദ്യബോഡി

d) പുകവലി

18.25 വയസ്സിനു മുകളിൽ രപോയമുള്ളവരിൽ ദ്യകോവിഡ്-19 വന്നതിനുദ്യശഷും ശ് യുന്ന പരിദ്യശോധന ഏത്

a)ഡി ഹഡമർ

b) കരൾ രപവർത്തന പരിദ്യശോധന

c)വ്യക്ക രപവർത്തന പരിദ്യശോധന

d) രകിയോറ്റിൻ എൻഹസമോറ്റിക്

19.ദ്യകോവിഡ് ദ്യരോഗികളിൽ എന്ത്ിനോണ് ഡി ഹഡമർ ശ്ോസ്റ്റ് ശ് യുന്നത്?

a)ദ്യകോവിഡ്-19 പരിദ്യശോധിക്കോൻ

b) ദ്യകോവിഡ് 19 ന്റ ദ്യശഷും രക്തും കട്ടപിോിക്കുന്നത് കണ്ടുപിോിക്കോൻ

c)ൈൃദ്യദ്യദ്ദപശികളുശ്ൈ രപവർത്തന ക്ഷമത അറിയോൻ

d) രക്തത്തിശ്ല ഘെകങ്ങളുശ്ൈ അളവറിയോൻ

20.ദ്ദകോവിഡ് 19 വന്നവരിൽ രപതിദ്ദരോധ കുത്തിശവപ്പ് എൈുദ്ദക്കണ്ട കോലയളവ് എരതയോണ്?

a)3 മോസും

b) 9 മോസും

c)20ദ്ിവസും

d) 6 മോസും

23.ദ്ദകോവിഡ് 19 മോനസിക ആദ്ദരോഗയശ്ത്ത എങ്ങശ്ന ബോധിക്കുന്നു?

a)വിഷോദ്ും

b) ഡിമൻഷയ

c)ദ്ദപെി

d) ആകോുംക്ഷ

24.ദ്ദകോവിഡ് 19ന്റ എതിശ്ര ദ്ദകരളത്തിൽ ലഭ്യമോകുന്ന രപതിദ്ദരോധ കുത്തിശവപ്പുകൾ ഏശ്തോശ്ക്ക?

a)ദ്ദകോവോക്സ്ത & ദ്ദകോവിഷീൽഡ്

b) സ്ഫപുട്നിക് & ദ്ദമോദ്ദഡർണ

c)അസ്ത്രസോശ്നനക്ക

d) ഹഫസർ

25.ദ്ദകോവിഡ് 19 ദ്ദരോഗികളിൽ ഉണ്ടോകുന്ന ൈൃദ്യ സുംബന്ധമോയ സങ്കീർണ്ണതകൾ ഏശ്തോശ്ക്ക?

a)ൈൃദ്യസ്തുംഭ്നും

b) ൈൃദ്യമിൈിപ്പ് കൂൈുന്നു

c)ൈൃദ്യമിൈിപ്പ് കുറയുന്നു

d) കോർഡിദ്ദയോ മദ്ദയോപ്പതി