ISSN : 2350-0743

www.ijramr.com

International Journal of Recent Advances in Multidisciplinary Research

Vol. 09, Issue 01, pp.7479-7484, January, 2022

RESEARCH ARTICLE

SOCIO ECONOMIC STATUS AND ITS IMPACT AMONG COVID-19 AFFECTED PATIENT IN SELECTED AREAS IN PUDUCHERRY

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ARTICLE INFO

Article History:

Received 29th October, 2021
Received in revised form
14th November, 2021
Accepted 27th December, 2021
Published online 30th January, 2022

Keywords:

Socioeconomic Status, Covid 19,Impact on Covid 19.

ABSTRACT

COVID 19 COVID-19 has led to severe and acute losses in many economies around the world due to illness and government-mandated social distancing orders. The aim of this study was to assess the socio economic status and its impact among patient with COVID -19.The study was conducted among 300 COVID-19 affected patients in selected areas in Puducherry.Non-probability purposive sampling technique was used and the data was collected by using the structured questionnaire to assess the Socio Demographic Variables and its impact which was developed by the investigator.The collected data was computerized and analyzed using SPSS version 25.The results of the study showed that the majority of the COVID -19 affected patients had lower middle socioeconomic status and had low level of impact due to COVID pandemic. There was a significant association between the socio economic status with selected demographic variables such as age, religion, marital status, residence, education and occupation of head of the family, total monthly income, vaccinated status, type of house and number of family members.This study will further enhance the health care providers to identify the needs of COVID -19 affected patients and to take care of them in holistic approach.

INTRODUCTION

Corona viruses are derived from the Latin word "corona" meaning crown. They are enveloped, positive-sense, single-stranded RNA viruses which belongs to the family Corona viridae which is known to produce mild respiratory diseases in humans. This virus was first isolated from humans in 1965. In recent times, there have been three major coronaviruses leading to disease outbreaks, beginning with the severe acute respiratory syndrome coronavirus (SARS–CoV) in 2002, followed by the Middle East respiratory syndrome coronavirus (MERS–CoV) in 2012, and now the severe acute respiratory syndrome corona virus. The virus when observed under electron microscope had a diameter of 60 to 140 nm with characteristic spikes of 9 to 12 nm, similar to the Corono viridae family. Human airway epithelial cells were used to isolate the virus that was named 2019–novel Coronavirus.In December 2019, China reported an outbreak of pneumonia of unknown causes in Wuhan, the capital city of Hubei province. The World Health Organization (WHO) named the resultant disease as Coronavirus disease (COVID-19). On March 11, 2020, WHO, after assessing the situation across the globe, declared COVID-19 as a pandemic (Sudipta Dhar Chowdhury and Anu Mary Oommen, 2020).

The complete clinical manifestation is not clear yet. The most commonly reported symptoms are *fever, cough, myalgia or fatigue, pneumonia, and complicated dyspnea*, whereas less common reported symptoms include headache, diarrhea, hemoptysis, runny nose, and phlegm-producing cough. Patients with mild symptoms were reported to recover after 1 week while severe cases were reported to experience progressive respiratory failure due to alveolar damage from the virus, which may lead to death. Cases resulting in death were primarily middle-aged and elderly patients with pre-existing diseases (tumor surgery, cirrhosis, hypertension, coronary heart disease, diabetes, and Parkinson's disease). For patients with suspected infection, the following procedures have been suggested for diagnosis performing real-time fluorescence (RT-PCR) to detect the positive nucleic acid of SARS-CoV-2 in sputum, throat swabs, and secretions of the lower respiratory tract samples. (Sasmita Poudel Adhikar, 2020). Remdesivir and Favipiravir may shorten the recovery time; lopinavir/ritonavir does not demonstrate treatment efficacy in severe patients. Combination therapy of traditional Chinese medicine with antiviral agents (interferon, lopinavir, or arbidol) may alleviate inflammation in severe COVID-19 patients based on small sample-sized observational studies and experts opinion.

(Po-Lin Chen, 2020)Covaxin is an inactivated viral vaccine. This vaccine is developed with Whole-Virion Inactivated Vero Cell-derived technology. They contain inactivated viruses, which cannot infect a person but still can teach the immune system to prepare a defence mechanism against the active virus. Covid shield has been prepared using the viral vector platform which is a totally different technology. Covid shield and Covaxin have been approved for people aged 18 years and above however, isn't any assurance if the vaccine can be given to children. Sputnik will be the third vaccine to be used in India against coronavirus. The risk of contracting COVID after 2 doses of Covaxin or Covid shiled is minuscule. A study has found 0.03% of people caught COVID after the 2nd dose of Covid shield and 0.04% tested positive after the 2nd dose of Covaxin. Pregnant and Lactating women can also take the vaccine. (Ritu Budania, 2021).Socioeconomic status has been a concern for many infectious diseases as it has been shown to be a risk factor for worse outcomes (Khurram Shahzad Khan,2020). From a public health perspective, socioeconomic disparities can lead to health inequality with regard to COVID-19 (Tak Kyu Oh, 2021).

COVID-19 has led to severe and acute losses in many economies around the world, which is likely to be more severe for India in the following manner; increase in poverty i.e. pushing more people below poverty line, due to illness and government-mandated social distancing orders. (Amory Martin, 2020) Despite the lockdown, sudden layoffs and loss of work have led to depression, alcoholism, substance abuse, and in some cases suicides. The negative psychological impacts of the pandemic are raising concerns about mental wellbeing, especially that of senior citizens, frontline healthcare providers, students and the general public around the globe. (Kritika Poudel and Pramod Subedi, 2020) ,(Golam Rasul *et al*., 2021).The mortality and morbidity of COVID 19 could have a significant influence on the long term economic effects. To halt and fight this pandemic, the Indian government has to immediately spend a significant amount of money from the budget. The Food Corporation of India recently allotted 12.96 lakh metric tonnes of food grains under the Pradhan Mantri Garib Kalyan Anna Yojna (PMGKAY) as an initiative of Government of India in its fight against the COVID19. (Hema S. Gopalan and Anoop Misra, 2020).

Moreover, COVID-19 affected patients lost their jobs and business due to long quarantine. They are also not able to meet their demand period. So the researcher selected the topic as to assess the socio economic status and its impact among COVID-19 affected patients in selected areas in puducherry.In Puducherry district, population ≈1.25 million, is located in southern India. Its earliest recorded case of COVID-19 was in March 2020; it had 7 total cases by the end of May, 67 by end of June, and 663 by end of July 2020. (Sitanshu SekharKar *et al*., 2020). Though many studies are conducted in the area of the COVID -19, the researcher could not find any valid study to the socio economic status and its impact among COVID -19 affected patients. Hence, the researcher felt the need *to assess the socio economic status and its impact among COVID -19 affected patient in selected areas in Puducherry region.*

Statement of the Problem: A study to assess the socio economic status and its impact among COVID -19 affected patient in selected areas in Puducherry.

OBJECTIVES

- To assess the socio demographic variables of the COVID-19 affected patients.
- To assess the socio economic status among COVID-19 affected patients.
- To assess the impact of corona virus among COVID -19 affected patients.
- To find out the association between socio economic status and its impact among COVID -19 affected patients with selected demographic variables.

MATERIALS AND METHODS

The study was conducted in selected area which covers Lawspet, Mudaliarpet, in Puducherry.

SAMPLE SELECTION CRITERIA

Inclusion criteria: Age above 18 years. COVID -19 affected patients with cured who are present at the time of data collection.

Exclusion criteria: COVID -19 affected patients with on treatment. COVID -19 affected patients who were not willing to participate in this study.

DATA COLLECTION PROCEDURE: Formal permission was obtained from the concerned authorities. 300 COVID -19 patients in the selected area of Puducherry (Lawspet, Mudaliarpet) by using purposive sampling technique. The researcher introduced herself and explains about the purpose of the study to the COVID -19 affected patients. Each day 30 to 45 samples were selected and the researcher obtained the consent from COVID -19 affected patients. Data was collected from the Covid patients by using structured questionnaires which was developed by the researcher. The researcher gathered the socio demographic variables, socio economic status and its impacts of Covid -19. After that, researcher created awareness regarding follow-up of COVID appropriate behavior and managing the complications of post COVID infections.

DESCRIPTION OF TOOL: The tool used for this study is a standardized tool, and the tool consists of 2 sections namely Section A: It consists of the Demographic Variables: age, sex, religion, marital status, type of family, residence, education of the head of the family, occupation of the head of the family, total monthly income, vaccinated or not, type of house and number of family members. Updated modified kuppuswamy Socio economic scale (2021) also used to assess the economic status. Section B: Impact of COVID-19 Questionnaire. It consists of 30 questions and also represents of 5 point likert scale.

RESULTS

Table 1: Reveals frequency and percentage wise distrbution of demographic variables among COVID-19 affected patients. Out of 300 subjects, 103 (34.3%) of them in the age group of 31 to 45 years, (177) 59% of them were male, most of them 279 (93%) were hindus, 227 (75.7%) were married, 227 (75.7%) were comes under nuclear family, 163 (54.3%) were lived in urban areas, 94 (31.3%) were graduate in educational status, 71 (23.7%) in Rupees 6175 – 18496 were family

Table 1: Frequency and Percentage wise Distribution of sociodemographic variables among COVID -19 affected patients

(N=300)

SL. NO	SOCIO DEMOGRAPHICVARIABLES	FREQUENCY (N)	PERCENTAGE (%)
1	Age (in years)		
	18 -30 years	92	30.7
	31-45 years	103	34.3
	46-60 years	73	24.3
	>60 years	32	10.7
2	Gender		
	Male	177	59
	Female	121	40.3
	Transgender	2	0.7
3	Religion		
	Hindu	279	93
	Muslim	11	3.7
	Christian	10	3.3
4	Marital status		
	Married	227	75.7
	Unmarried	67	22.3
	Widow	6	2
	Divorced/separated	0	0
5	Type of family		
	Nuclear	227	75.7
	Joint	73	24.3
6	Residence		
	Urban	163	54.3
	Rural	137	45.7
7	Educational status of the head of the family		
	Profession or honours	38	12.7
	Graduate	94	31.3
	Intermediate or diploma	38	12.7
	High school certificate	56	18.7
	Middle school certificate	28	9.3
	Primary school certificate	29	9.7
	Illiterate	17	5.6
8	**Occupational status of the head of the family**		
	Legislators,senior officialsb & manager	0	0
	Professionals	40	13.3
	Technicians and associate professionals	48	16
	Clerks	17	5.7
	Skilled works & shop, market sales	15	5
	Skilled agriculture and fishery	42	14
	Craft & related trade workers	9	3
	Plant & machine operators	35	11.7
	Elementary occupation	42	14
	Unemployed	52	17.3
9	Total monthly income of the family		
	>123,322	0	0
	61663-123321	0	0
	46129-61662	38	12.7
	30831-46128	61	20.3
	18497-30830	66	22
	6175-18496	71	23.7
	<6174	64	21.3
10	Vaccination		
	Yes	122	40.7
	No	178	59.3
11	Number of family members		
	1-3	80	26.7
	4-5	174	58
	More than 5 members	46	15.3
1	Which type of house		
	Kutcha house	51	17
	Mixed house	144	48
	Pucca house	97	32.4
	Mansion	1	0.3
	No house	7	2.3

Table 2. Percentage wise distribution of level of socio economic status among among COVID -19 affected patients

(N=300)

Variables	Frequency (N)	Percentage (%)	Mean and Standard Deviation
Upper (26-29)	0	0	11.94±4.323
Upper middle (16-25)	69	23	
Lower middle (11-15)	127	42.3	
Upper lower (5-10)	77	25.7	
Lower (<5)	27	9	
Total	300	100	

Table 3.Frequency and percentage wise distribution of level of socio economic status and its impact among COVID -19 affected patients

(N = 300)

LEVEL OF SOCIO ECONOMIC STATUS AND ITS IMPACT	Frequency (N)	Percentage (%)	Mean and Standard Deviation
Low (1-50)	228	76	42.14±11.85
Moderate (51-100)	72	24	
High (101-150)	0	0	
Total	300	100	

Table 4. Association between the level of socio economic status and its impact among COVID -19 affected patients with their selected socio- demographic variables

(N=300)

SL. NO	SOCIO-DEMOGRAPHIC VARIABLES	LEVEL OF SOCIO ECONOMIC STATUS AND ITS IMPACT				chi- square X^2	df	p-value
		LOW		MODERATE				
1	Age (in years)	N	%	N	%			
	18 -30 years	58	25.4	34	47.2	12.72	3	0.005* (S)
	31-45 years	82	36	21	29.2			
	46-60 years	61	26.8	12	16.7			
	>60 years	27	11.8	5	6.9			
2	Gender					0.873	2	0.646 (NS)
	Male	136	59.6	41	56.9			
	Female	90	39.5	31	43.1			
	Transgender	2	0.9	0	0			
3	Religion					7.13	2	0.028* (S)
	Hindu	207	90.8	72	100			
	Muslim	11	4.8	0	0			
	Christian	10	4.4	0	0			
4	Marital status					10.59	2	0.005* (S)
	Married	181	79.4	46	63.9			
	Unmarried	45	19.7	22	30.7			
	Widow	2	0.9	4	5.6			
	Divorced/separated	0	0	0	0			
5	Type of family					2.98	1	0.084 (NS)
	Nuclear	178	78.1	49	68.1			
	Joint	50	21.9	23	31.9			
6	Residence					36.0	1	0.001** (S)
	Urban	146	64	17	23.6			
	Rural	82	36	55	76.4			

Continue …

7	Educational status of the head of the family					27.59	6	0.001** (S)
	Profession or honours	35	15.4	3	4.2			
	Graduate	74	32.5	20	27.8			
	Intermediate or diploma	25	11	13	18.1			
	High school certificate	39	17.1	17	23.5			
	Middle school certificate	28	12.3	0	0			
	Primary school certificate	19	8.3	10	13.9			
	Illiterate	8	3.4	9	12.5			
8	Occupational status of the head of the family					32.23	8	0.001** (S)
	Legislators,senior Officialsb & manager	0	0	0	0			
	Professionals	36	15.8	4	5.6			
	Technicians and associate professionals	41	18	7	9.7			
	Clerks	12	5.2	5	6.9			
	Skilled works & shop, market sales	12	5.3	3	4.2			
	Skilled Agricultural & Fishery Workers	30	13.2	12	16.7			
	Craft & related trade workers	4	1.8	5	6.9			
	Plant & machine operators	24	10.5	11	15.3			
	Elementary occupation	22	9.6	20	27.8			
	Unemployed	47	20.6	5	6.9			
9	Total monthly income of the family (2021)					28.05	4	0.001** (S)
	>123,322	0	0	0	0			
	61663-123321	0	0	0	0			
	46129-61662	30	13.2	8	11.1			
	30831-46128	31	13.6	30	41.7			
	18497-30830	57	25	9	12.5			
	6175-18496	56	24.6	15	20.8			
	<6174	54	23.7	10	13.9			
10	Vaccination					5.193	1	0.023* (S)
	Yes	101	44.3	21	29.2			
	No	127	55.7	51	70.8			
11	Number of family members					7.243	2	0.027* (S)
	1-3	52	22.8	28	38.9			
	4-5	139	61	35	48.6			
	More than 5 members	37	16.2	9	12.5			
12	Which type of house					19.09	4	0.001** (S)
	Kutcha house	40	17.5	11	15.3			
	Mixed house	122	53.6	22	30.5			
	Pucca house	59	25.9	38	52.8			
	Mansion	1	0.4	0	0			
	No house	6	2.6	1	1.4			

***-p < 0.001 Highly significant , *-p < 0.05 significant, NS-Non Significant*

monthly income, 178 (59.3%) were not vaccinated, most of the COVID-19 affected patients were having 4-5 members of family 174 (58%) and 144 (48%) were having mixed house respectively. Table 2:- Infers frequency and percentage wise distribution of level of socio economic status by using - Modified Kuppuswamy socioeconomic scale. Among 300 COVID -19 affected patients. 42.3% of the COVID -19 affected patients had lower middle, 25.7% had upper lower, 23% had upper middle and only 9% had lower socioeconomic.

The mean and standard deviation of level of socio economic status among COVID -19 affected patients is 11.94$\pm$4.323 respectively. Table: 3- represents frequency and percentage wise distribution of level of socio economic status and its impact among COVID -19 affected patients. 76% of the COVID -19 affected patients had low level of impact and only 24% had moderate level of impact. The mean and standard deviation of level of socio economic status and its impact among COVID -19 affected patients is 42.14$\pm$11.85 respectively

Table 4: depicts that there is statistically significant association between the level of socio-economic status, age, religion, marital status, residence, education of the head of the family, occupation of the head of the family, total monthly income, vaccinated or not, type of house and number of family members and its impact among COVID -19 affected patient with chi-square value at $p<0.001$ level and $p<0.05$ level.

CONCLUSION

The study was concluded that the majority of the COVID -19 affected patients had lower middle socioeconomic status and had low level of impact due to COVID pandemic. There was a significant association between the socio economic status with selected demographic variables such as age, religion, marital status, residence, education and occupation of head of the family, total monthly income, vaccinated status, type of house and number of family members. This study will further enhance the health care providers to identify the needs of COVID -19 affected patients and to take care of them in holistic approach.

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