

## **“A study to assess the level of attitude towards adverse ill effect of mucormycosis among post covid patients residing at selected community area, puducherry”**

Ms. U. Suvedha<sup>1</sup>, Mr. R.Prabakaran<sup>2</sup>, DR. G. Muthamilselvi<sup>3</sup>

<sup>1</sup>UG Student, Department of Community Health Nursing, SMVNC, Puducherry – 605 107

<sup>2</sup>Assisted Professor, Department of Community Health Nursing, SMVNC, Puducherry – 605 107

<sup>3</sup>Principal, Sri ManakulaVinayagar Nursing College, Puducherry – 605 107

Corresponding Author: Mr. R. Prabakaran - Mail Id: [Prabakaranr@smvnc.ac.in](mailto:Prabakaranr@smvnc.ac.in)

### **ABSTRACT**

*Mucormycosis is an angioinvasive fungal infection due to fungi of the order Mucorales. Depending on the clinical presentation it is classified as rhinocerebral, pulmonary, cutaneous, gastrointestinal, disseminated or other, which includes uncommon rare forms, such as endocarditis, osteomyelitis, peritonitis, renal, etc. The disease was first described in 1876 when Fürbinger described in Germany a patient who died of cancer and in whom the right lung showed a hemorrhagic infarct with fungal hyphae and a few sporangia . In 1885, Arnold Paltauf published the first case of disseminated mucormycosis, which he named “Mycosis mucorina” His drawings of the etiologic agent showed the presence of sporangiophores and rhizoid-like structures, and this led to the conclusion that the infection was most probably caused by Lichtheimia corymbifera. Over time, more cases were diagnosed, and the incidence of the disease has increased*

### **I. INTRODUCTION**

#### **“MAINTAINING GOOD HEALTH SHOULD BE THE PRIMARY FOCUS OF EVERYONE”**

*-Sangram Singh*

American pathologist R.D. Baker coined the term Mucormycosis. It is also known as Zygomycosis. It can be defined as an insidious fungal infection caused by members of Mucorales and zygomycotic species. Mucormycotina are the common saprobes originating from the rotten matter or soils. Infections with Mucorales are categorized by rapid progression.

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### **II. REVIEW OF LITERATURE**

Vijay Kumar Chennamchetty et al (2020) conducted a study on post covid associated mucormycosis in Apollo institute of medical science and research in india. 25 post covid patients are through simple sampling technique for conducting a study. A structured questionnaire is used to the post covid about the mucormycosis infection and its risk factor. The result shows that significantly there is an increased case of mucormycosis is due to covid 19 and remain association with impaired immune system of infected patient. The lack of selective methods for fungi infection diagnosis culture and treatment results in necrotic and inflammatory outcomes of mucormycosis.

### **STATEMENT OF THE PROBLEM**

“A study to assess the level of attitude towards adverse ill effect of mucormycosis among post covid patients residing at selected community area, puducherry”.

### **OBJECTIVES OF STUDY**

- To assess the level of attitude regarding mucormycosis among the post covid patients.
- To associate the level of knowledge and attitude regarding mucormycosis among post covid patient.

- To evaluate the attitude of the post covid patients towards the side effect of mucormycosis.
- To develop the information about mucormycosis among posst covid patients with their selected demographic variables.

**ASSUMPTION**

□ It is assumed that post covid patients may have inadequate knowledge regarding the adverse effect of mucormycosis.  
This study will help the post covid patients to gain knowledge regarding adverse effect.

**III. MATERIALS AND METHODS**

Research methodology is a way to systematically solve the research problem by typically adopting various steps. It is one of the important phase in research work in which the investigator makes a number of decisions about the methods used to study the research problem through data collection. This phase of study includes research approach, research design, variables, setting, population, sample and sample size, sampling techniques, criteria for sample selection, development and description of tool, scoring procedure, pilot study, data collection procedure and plan of statistical analysis of the data (politics & hungler 20). The present study is carried out to **assess the level of attitude towards adverse ill effect of mucormycosis among post covid patients residing at selected community area, puducherry.**

**Section A:**

Demographic variables such as age, gender, religion, education, job type, marital status, types of family, having children, types of residence, previous history of covid 19, having PPE, duration of steroid intake, any lifestyle diseases.

**Section B:**

Attitude scale used to asses the adverse effect of mucormycosis in post covid patient among silukaripalayam,puducherry.

**SCORE INTERPRETATION:**

Classification	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
Score	1-25	25-50	50-75	75-100	100-125

**RESEARCH APPROACH:**

A quantitative research approach was selected for this study.

**RESEARCH DESIGN:**

The descriptive research design was adapted for this study

**SETTING OF THE STUDY:**

The study will be conducted in silukaripalayam, puducherry.

**POPULATION:**

The population of the study is silukaripalayam village people.

**SAMPLE:**

The sample of the study is post covid patients.

**SAMPLE SIZE:**

The sample size of the study consists of 50

**SAMPLING TECHNIQUE:**

The convenience sampling technique was used for this study.

**CRITERIA FOR SAMPLE SELECTION:**

**Inclusion criteria:**

- Post covid patient.
- Those who are willing to participate in the study.
- Both male and female.

**Exclusion criteria:**

- People having communicable and non communicable disease other than covid.
- Those who are not willing to participate in the study.

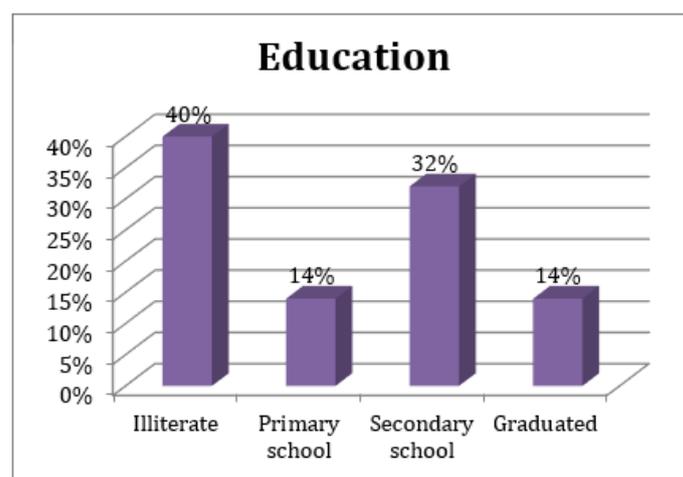
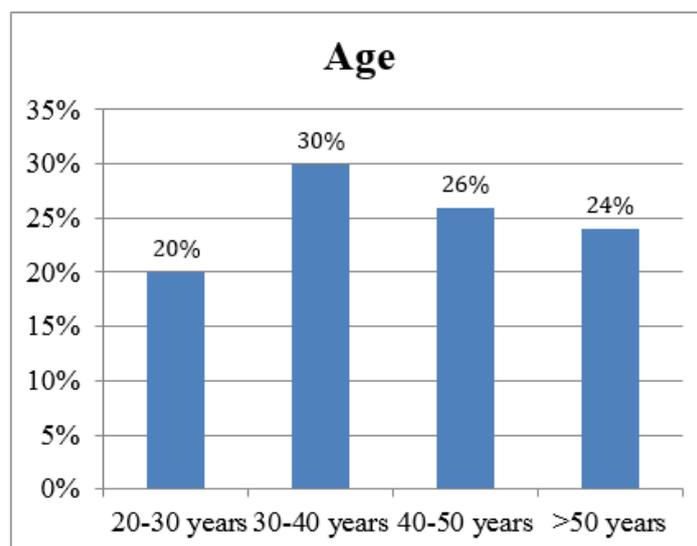
#### IV. RESULTS

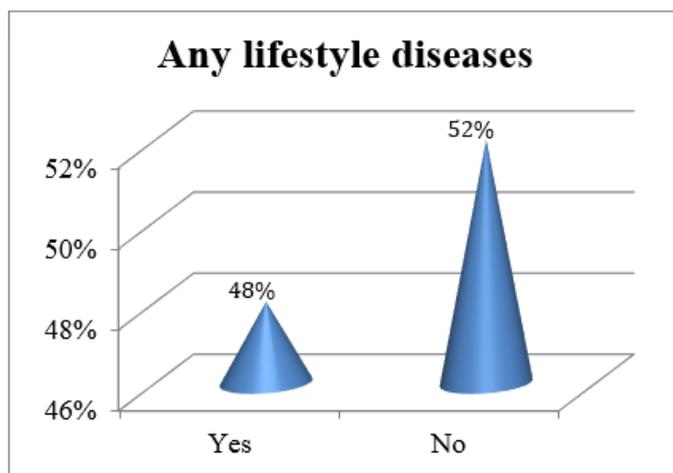
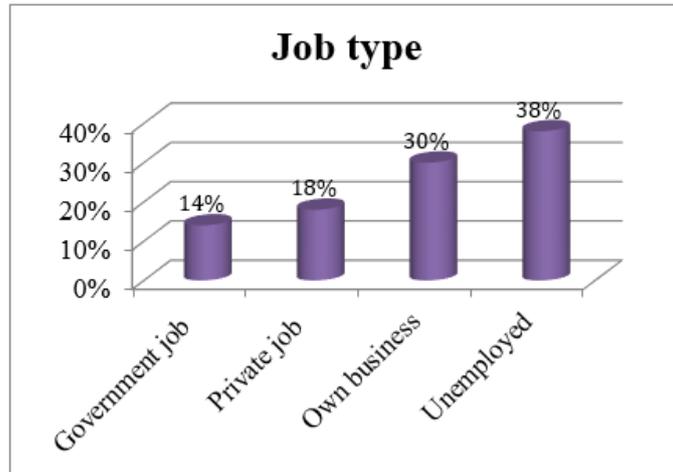
Out of the 50 post covid patients who were interviewed, Majority of the patients 15(30%) of study population were in the age group are 30-40 years. Majority of the patients were female 34(68%). Majority of the patients were Hindu 45(90%). Majority of the patients were Illiterate 20(40%). Majority of the patients were Unemployed 19(38%). Majority of the patients were married 37(74%). Majority of the patients were Nuclear family 26(52%). Majority of the patients were having 1 child 19(38%). Majority of the patients were Rural 38(76%). Majority of the patients had previous history of covid 19, 30(60%). Majority of the patients had PPE, 28(56%). Majority of the patients were 15 days duration of steroid intake 21(42%). Majority of the patients were had not any lifestyle diseases 26(52%).

#### Frequency and percentage wise distribution of demographic variables among post covid patients.(N=50)

SL. NO	DEMOGRAPHIC VARIABLES	FREQUENCY (N)	PERCENTAGE (%)
<b>1</b>	<b>Age</b>		
	A) 20-30 years	10	20
	B) 30-40 years	15	30
	C) 40-50 years	13	26
	D) >50 years	12	24
<b>2</b>	<b>Sex</b>		
	A) Male	16	32
	B) Female	34	68
	C) Transgender	0	0
<b>3</b>	<b>Religion</b>		
	A) Hindu	45	90
	B) Muslim	1	2
	C) Christian	4	8
	D) Others	0	0
<b>4</b>	<b>Education</b>		
	A) Illiterate	20	40
	B) Primary school	7	14
	C) Secondary school	16	32
	D) Graduated	7	14
<b>5</b>	<b>Job type</b>		
	A) Government job	7	14
	B) Private job	9	18
	C) Own business	15	30
	D) Unemployed	19	38
<b>6</b>	<b>Marital status</b>		
	A) Unmarried	6	12
	B) Married	37	74
	C) Divorced	7	14
<b>7</b>	<b>Type of family</b>		
	A) Nuclear	26	52
	B) Joined family	18	36
	C) Single	6	12
<b>8</b>	<b>Having children</b>		
	A) One children	19	38
	B) Two children	17	34

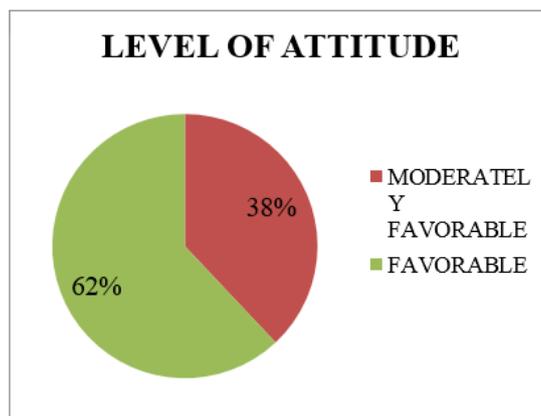
	C) 2 or more children	14	28
<b>9</b>	<b>Type of Residence</b>		
	A) Rural	38	76
	B) Urban	12	24
<b>10</b>	<b>Previous history of covid 19</b>		
	A) Positive	30	60
	B) Negative	20	40
<b>11</b>	<b>Having PPE</b>		
	A) Yes	28	56
	B) No	22	44
<b>12</b>	<b>Duration of steroid intake</b>		
	A) 14 days	13	26
	B) 30 days	16	32
	C) 15 days	21	42
<b>13</b>	<b>Any lifestyle diseases</b>		
	A) Yes	24	48
	B) No	26	52





**Frequency and percentage wise distribution of level of attitude regarding mucormycosis among the post covid patients.(N = 50)**

LEVEL OF ATTITUDE	FREQUENCY (n)	PERCENTAGE (%)
UNFAVORABLE	0	0
MODERATELY FAVORABLE	19	38
FAVORABLE	31	62
<b>Total</b>	<b>50</b>	<b>100</b>
<b>Mean±Standard deviation</b>	<b>86.98±13.35</b>	



**Association between the level of attitude regarding mucormycosis among the post covid patients with their selected demographic variables (N=50)**

SL. NO	DEMOGRAPHIC VARIABLES	LEVEL OF ATTITUDE				Chi-square X <sup>2</sup> and P-Value
		MODERATE		FAVORABLE		
		N	%	N	%	
<b>1</b>	<b>Age</b>					X <sup>2</sup> =0.22 Df=3 p =0.973 NS
	A) 20-30 years	4	21.1	6	19.4	
	B) 30-40 years	5	26.3	10	32.3	
	C) 40-50 years	5	26.3	8	25.8	
	D) >50 years	5	26.3	7	22.6	
<b>2</b>	<b>Sex</b>					X <sup>2</sup> =0.455 Df=1 p =0.500 NS
	A) Male	5	26.3	11	35.5	
	B) Female	14	73.7	20	64.5	
	C) Transgender	0	0	0	0	
<b>3</b>	<b>Religion</b>					X <sup>2</sup> =0.858 Df=2 p =0.651 NS
	A) Hindu	17	89.5	28	90.3	
	B) Muslim	0	0	1	3.2	
	C) Christian	2	10.5	2	6.5	
	D) Others	0	0	0	0	
<b>4</b>	<b>Education</b>					X <sup>2</sup> =7.28 Df=3 p =0.033 *S
	A) Illiterate	6	31.6	14	45.2	
	B) Primary school	4	21.1	3	9.7	
	C) Secondary school	8	42.1	8	25.8	
	D) Graduated	1	5.3	6	19.4	
<b>5</b>	<b>Job type</b>					X <sup>2</sup> =10.6 Df=3 p =0.002 *S
	A) Government job	4	21.1	3	9.7	
	B) Private job	5	26.3	4	12.9	
	C) Own business	6	31.6	9	29	
	D) Unemployed	4	21.1	15	48.4	
<b>6</b>	<b>Marital status</b>					X <sup>2</sup> =1.33 Df=3  p =0.721 NS
	A) Unmarried	2	10.5	4	12.9	
	B) Married	13	68.4	24	77.4	
	C) Divorced	4	21.1	3	9.7	
<b>7</b>	<b>Type of family</b>					X <sup>2</sup> =0.53 Df=3 p =0.911 NS
	A) Nuclear	10	52.6	16	51.6	
	B) Joined family	6	31.6	12	38.7	
	C) Single	3	15.8	3	9.7	
<b>8</b>	<b>Having children</b>					X <sup>2</sup> =2.73 Df=3 p =0.435 NS
	A) One children	7	36.8	12	38.7	
	B) Two children	6	31.6	11	35.5	
	C) 2 or more children	6	31.6	8	25.8	
<b>9</b>	<b>Type of Residence</b>					X <sup>2</sup> =2.84 Df=2 p =0.242
	A) Rural	12	63.2	26	83.9	

	B) Urban	7	36.9	5	16.1	NS
<b>10</b>	<b>Previous history of covid 19</b>					$X^2=5.78$ Df=3 p =0.123 NS
	A) Positive	9	47.4	21	67.7	
	B) Negative	10	52.6	10	32.3	
<b>11</b>	<b>Having PPE</b>					$X^2=3.06$ Df=3 p =0.381 NS
	A) Yes	9	47.4	19	61.3	
	B) No	9	47.4	12	38.8	
<b>12</b>	<b>Duration of steroid intake</b>					$X^2=1.21$ Df=3 p =0.749 NS
	A) 14 days	5	26.3	8	25.8	
	B) 30 days	6	31.6	10	32.3	
	C) 15 days	8	42.1	13	41.9	
<b>13</b>	<b>Any lifestyle diseases</b>					$X^2=8.33$ Df=3 p =0.017 *S
	A) Yes	8	42.1	16	51.6	
	B) No	11	57.9	15	48.4	

It show that demographic variable, *education, Job type and any lifestyle diseases* had shown statistically significant association between the levels of attitude regarding mucormycosis among the post covid patients with their selected demographic variables. The other demographic variable had not shown statistically significant association between the level of attitude regarding mucormycosis among the post covid patients with their selected demographic variables respectively.

## V. CONCLUSION AND RECOMMENDATIONS

A study to assess the level of attitude towards adverse ill effect of mucormycosis among post covid patients residing at selected community area at puducherry. The findings of the study revealed that majority of the patients Majority of the patients 31(62%) had favorable level of attitude and 19(38%) had moderately favorable level of attitude.

- The mean and standard deviation of level of attitude regarding mucormycosis among the post covid patients is (86.98±13.35) respectively.

### **NURSING IMPLICATIONS:**

The study had implications for nursing practice, nursing education, nursing administration and nursing research.

### **NURSING PRACTICE:**

The community area nurses must have some knowledge about mucormycosis and take care of high risk population.

### **NURSING EDUCATION:**

The nurse educated the general people about the mucormycosis in the community settings and handling of high risk clients. Provide a necessary health education.

### **NURSING RESEARCH:**

Numbers of studies are being conducted to assess the level of attitude towards adverse ill effect of mucormycosis among post covid patient residing at selected community area at puducherry. Nursing studies are comparatively less in this community field. Different studies have to be conducted further prevalence of infection.

### **NURSING ADMINISTRATION:**

Nurse’s administrators can make necessary steps to spread awareness about mucormycosis. Nurse’s administration can organize awareness program or some participation events about mucormycosis.

### **RECOMMENDATIONS:**

- A similar study can be conducted by large number of sample in future.
- The study was conducted to particular group of people at particular age.
- A prospective study can also be conducted

## BIBLIOGRAPHY

### **BOOK REFERENCEE:**

- [1]. Basavanthappa BT .Nursing Research, New Delhi; Jaypee Brothers Medical Publishers(p)Ltd.
- [2]. K.Park; A textbook of preventive and social medicine; published by banarsidas bhanot ; 25th edition.
- [3]. Shyamala D Manivannan ; A textbook of community health nursing ; CBS Publishers & Distributors.
- [4]. S Kamalam ; Essentials in community health nursing practice ; jaypee publications; 3rd edition.

- [5]. Simrat kaur N.J . Singh ; A textbook of community health nursing -1 , lotus Publishers.  
[6]. Suresh K Sharma ,Nursing Research and Statistics, Published by Elsevier, A Division of Reed Elsevier India Private Limited.

**JOURNAL REFERENCE:**

- [7]. Kameshwaran S, Sriram N, Raju D, Manimekalai P, Dhanalakshmi M (2021) Symptoms and treatment strategy of black fungus in covi-19 patients. Int J Pharm Clin Res 5: 59-62. Link: <https://bit.ly/2WFHoww>  
[8]. Petrikos G, Skiada A, Lortholary O, Roilides E, Walsh TJ, et al. (2012) Epidemiology and Clinical Manifestations of Mucormycosis. Clinical Infectious Diseases 54: S23-S34. Link: <https://bit.ly/3zv2kEK>  
[9]. Lewis RE, Kontoyiannis DP (2013) Epidemiology and treatment of mucormycosisexternal icon. Future Microbiol 8: 1163-1175. Link: <https://bit.ly/3jynnRb>  
[10]. Hasegawa M (2017) Differential Diagnosis and Pathogenesis for Orbital Tumors. Japanese Journal of Neurosurgery June 26: 419-429. Link: <https://bit.ly/3yD9J3A>  
[11]. Ministry of AYUSH Govt. of India, Guidelines for Ayurveda practitioner’s for covid-19 Link: <https://bit.ly/3DunVzH>  
[12]. YM Sri Sarada Ayurveda Hospital Derisanamcope, Azhagiapandiapuram Post Kanyakumari Dist- 629851, Tamil nadu. & Professor Dept of Kayachikitsa & PG StudiesPankajakasthuri Ayurveda Medical College, Killy, Kattakkada.

**NET REFFERENCE**

- [13]. [www.Wikipedia.com](http://www.Wikipedia.com)  
[14]. [www.researchgate.net](http://www.researchgate.net)  
[15]. [www.ncbi.nlm.nih.gov/pubmed.com](http://www.ncbi.nlm.nih.gov/pubmed.com)  
[16]. [www.Science direct.com](http://www.Science direct.com)  
[17]. [www.hindawi.com](http://www.hindawi.com)  
[18]. [www.Medrxiv.org](http://www.Medrxiv.org)  
[19]. [www.webmd.com](http://www.webmd.com)