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An observational study of effects COVID 19 on the contacts of COVID 19 positive patients in a Eastern India

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ABSTRACT
COVID 19 has emerged as a greatest pandemic of century whose after effects will be seen for long. The mental stress associated with the disease especially to the contacts of COVID 19 positive patients has manifested as various symptoms of which anxiety or palpitation arose as paramount symptom. We analysed the data of 300 subjects who were contacted telephonically in Jamshedpur India with history of contact with the patient of COVID 19 between January 2021 to July 2021. The study considered the various factors like age, gender, profession, symptoms (Fever, Sore throat, Myalgia, Headache, Diarrhoea/vomiting, Chest pain/ palpitations, Anxiety/depression, Insomnia), vaccination status, co-morbidities in the form of diabetes mellitus and hypertension. In this study most affected age group was 31-40 (38.33%) which mostly consisted of females (63.33%). Non health care workers were more in number and anxiety/depression (69.33%) has emerged out as a most frequently observed symptom. The number of those who were not vaccinated against COVID 19 (69.88%) overcome those who were vaccinated in terms of symptoms. Those with co-morbidities were at the receiving end. This study intensify that the mental trauma the contact of the COVID 19 positive patient undergoes. Even the health care workers though less in number has bore the brunt of this disease and this disease has not spared even the healthy subjects.

Keywords –virtual covid, COVID 19, vaccines, antiviral drugs, contacts, phobia, epidemic

I. INTRODUCTION

The first case of corona pandemic dates back to December 2019 in China **[1]**. This has emerged out to be a severe public health issue which has shattered the health system of every country .Various vaccines and antiviral drugs are under research and in various phases of clinical trials for the same**[2].**The world has witnessed the epidemicof the Middle East Respiratory Syndrome-CoV (2002) and Severe Acute Respiratory Syndrome-CoV (2012).It affects the respiratory system and gradually engulfing the immune system of the host **[3].** This epidemic has not even spared the children with fever and cough being the most prominent symptoms**[4].** Asymptomatic carriers play a pivotal role in the transmission of corona virus leading to its recurrence **[5].**

The corona virus has not only infected respiratory system but also has skin manifestations in the form of extensive pustules, rash and itching with eruptions tops the list**[6].**

II. MATERIALS AND METHODS

This was telephonically conducted study done on COVID negative subjects who were in contact with COVID positive patients. This study was conducted from January 2021 to December 2021 in Jamshedpur.

Selection criteria:

1. COVID negative subjects who were in contact with COVID positive patients of age group 18 years and above.
2. Health care workers and Non health care workers.

Exclusion criteria

1. Subjects who were COVID positive were excluded from present study.
2. Subjects with previous psychiatric illnesses were excluded
3. Patients who were seriously ill admitted in ICU.
4. Subjects below 18 years of age.
5. Subjects who were not willing to participate in this study

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III. RESULTS

Table1: Age wise distribution

Age groups	Number of subjects	Percentage
18-30yrs	62	20.6%
31-40yrs	115	38.33%
41-50yrs	75	25%
>50yrs	48	16%
Total	300	100%

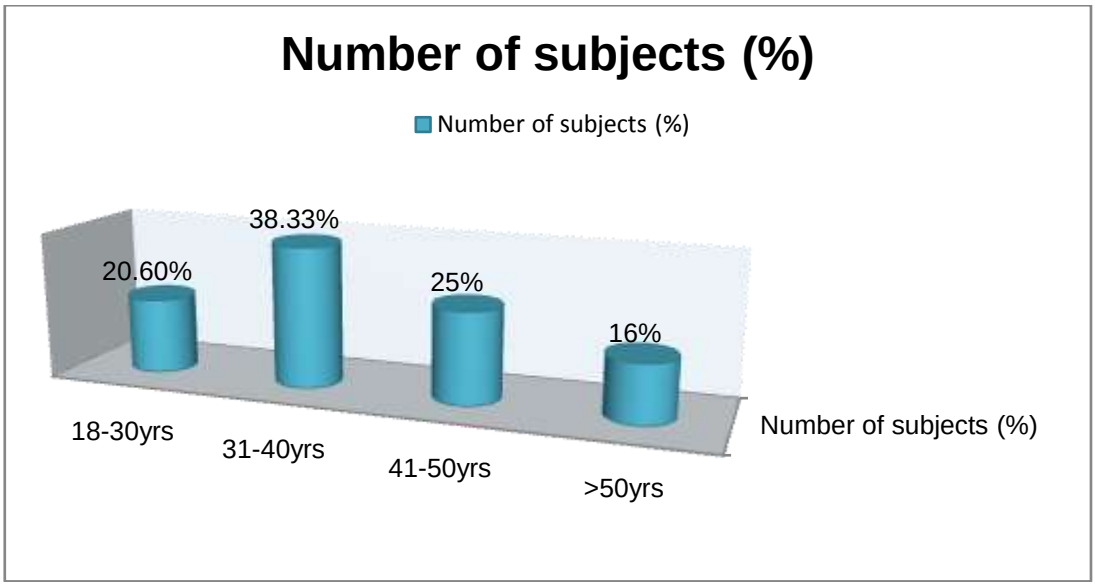

Figure 1: Age wise distribution of subjects

Table 2: Gender wise distribution

Gender	Number of subjects	Percentage
Male	110	36.66%
Female	190	63.33%
Total	300	100%

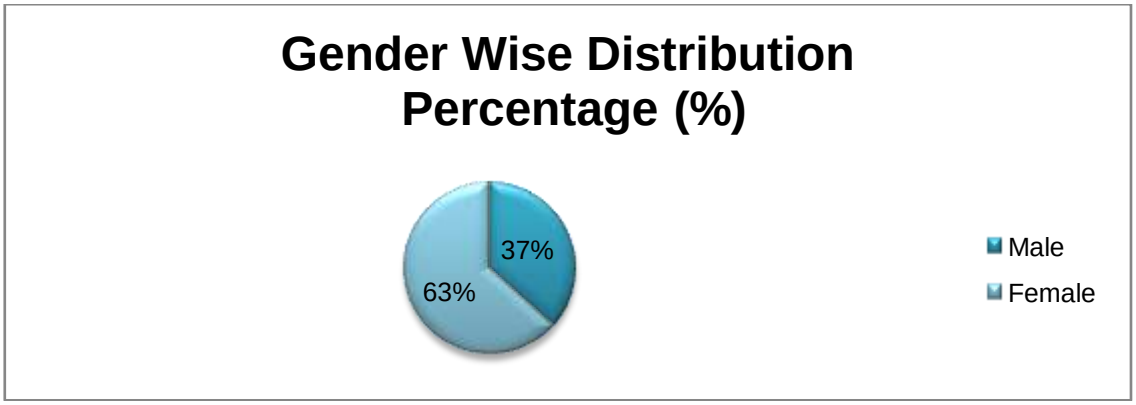

Figure 2: Gender wise distribution of subjects

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Table 3: Profession wise distribution

Profession	Number of subjects	Percentage
Health care worker	124	41.33%
Non Health care worker	176	58.66%
Total	300	100%

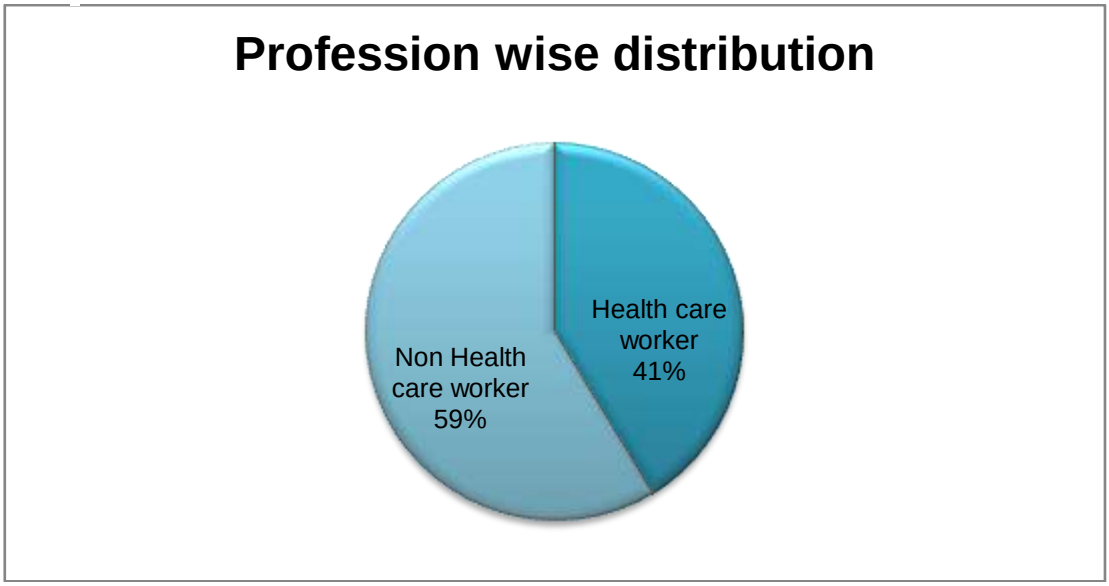

Figure 3: Profession wise distribution

Table 4: Age Wise Distribution of symptoms

Symptoms	**Number of patients in age groups**					
	18-30yrs	31-40yrs	41-50yrs	>50yrs	Total	Percentage
Fever	6	43	88	10	147	49%
Sore throat	86	54	8	4	152	50.66%
Myalgia	5	12	72	34	123	41%
Headache	8	18	76	30	132	49%
Diarrhoea/vomiting	0	3	8	5	16	5.33%
Chest pain/ palpitations	16	36	65	69	186	62%
Anxiety/depression	20	47	69	72	208	69.33%
Insomnia	8	29	62	67	166	55.33%

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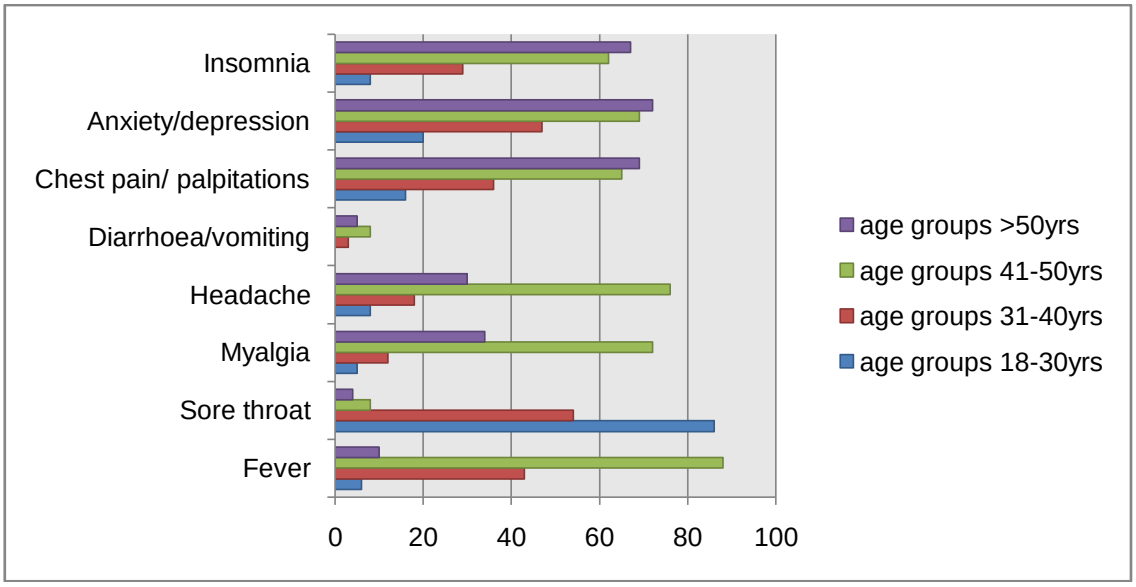

Figure 4: Age group wise distribution of each Symptom

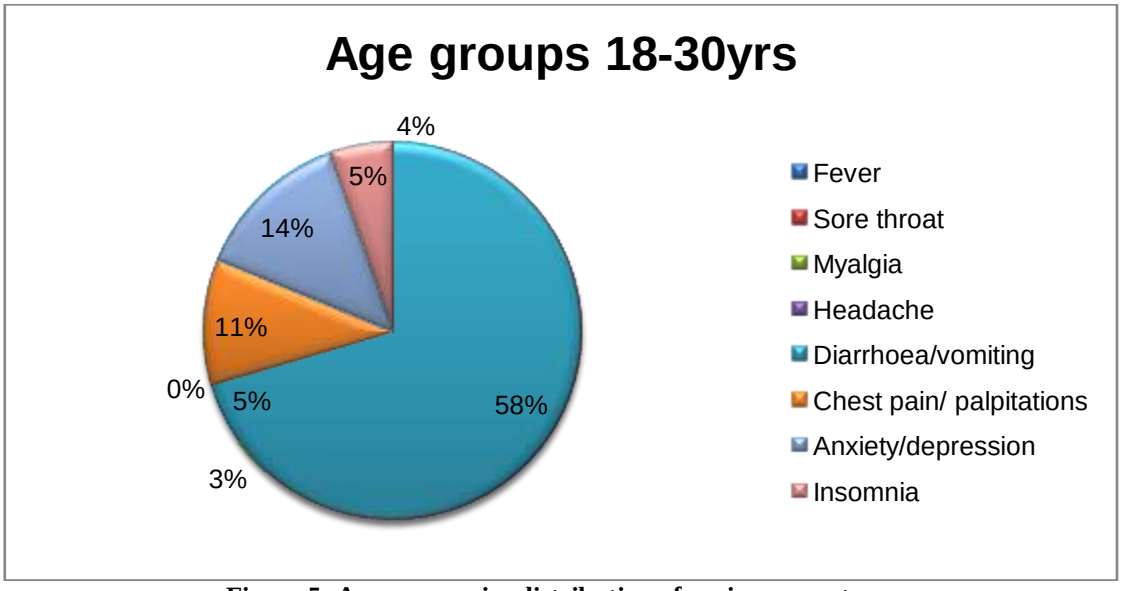

Figure 5: Age group wise distribution of various symptoms

Table 5: Distribution of subjects according to vaccination status

Vaccination status	Number of subjects	Symptomatic		Percentage of symptomatic subjects
		Yes	No	
Pre vaccination	176	123	53	69.88%
Post vaccination	124	44	80	35.48%

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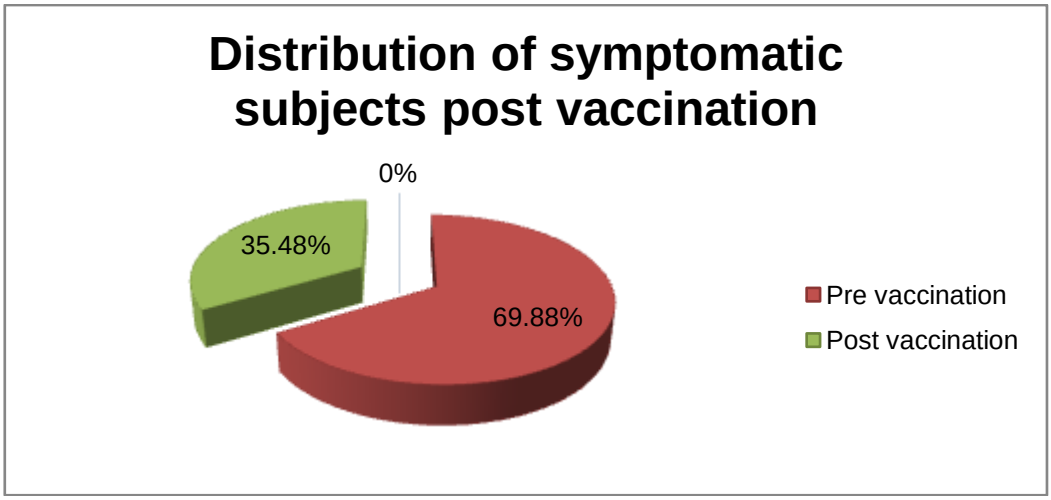

Figure 6:Distribution of symptomatic subjects post vaccination

Table 6: Distribution of symptoms in co-morbid subjects

Co- morbidity	Number of subjects	Symptoms		Percentage of symptomatic subjects
		Yes	No	
HTN(hypertension)	76	41	35	53.94%
DM (Diabetes)	68	59	9	86.76%

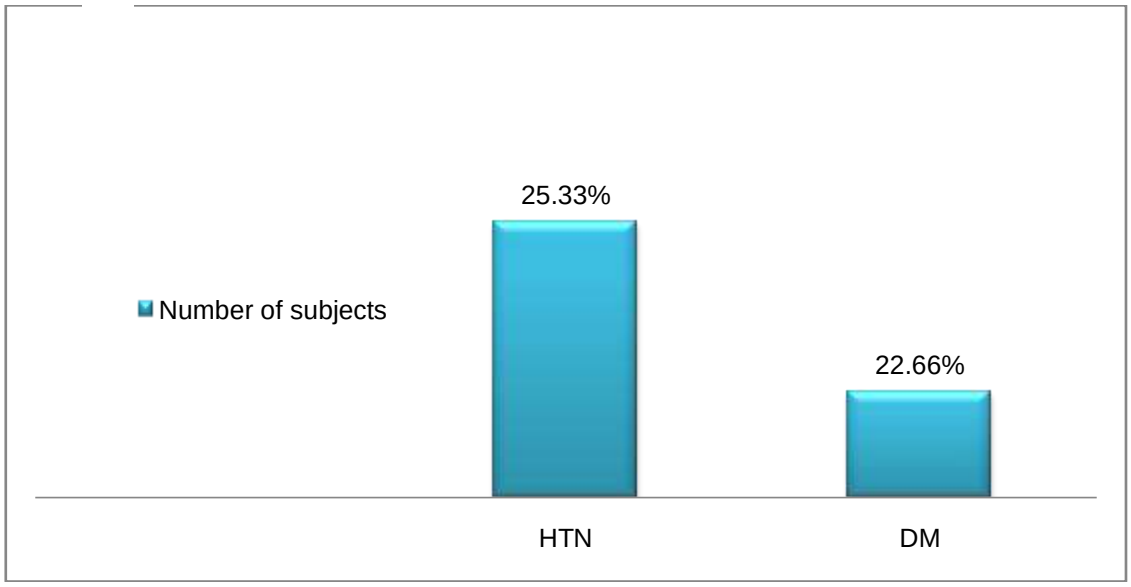

Figure 7:Distribution of subjects with co-morbidity

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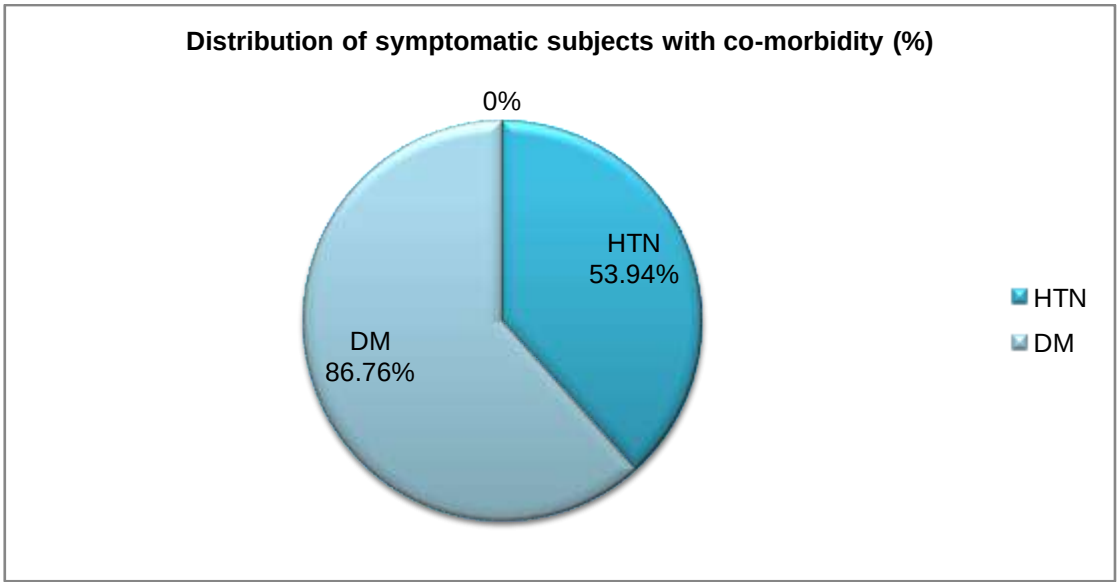

Figure 8:Distribution of symptomatic subjects with co-morbidity (%)

IV. DISCUSSION

A case report from China signifies the importance of fear and anxious behaviour that led to the testing of nasopharyngeal swabs with skiagrams of chest giving positive results of COVID 19 inspite of the previous nasopharyngeal swab coming negative **[7].**

An article quoted by Eve Rittenberg (doctor) summarize the fear in the minds of subjects with respect to contact of COVID 19 positive patients and the casual diagnosis of COVID in each and every symptomatic patients in not only the public but also the health workers **[8].**

In this study the results obtained as seen in tabulation depicts the phobia of contact with patient with COVID 19 positive patient. Total of 300 subjects were studied and the most affected age group was 31-40 (38.33%) but the least affected group was more than 50 years (16%). Females (63.33%) were more in number as compared to males (36.66%) when total subjects were considered. Out of 300 subjects 190 were females and the rest 110 were males. Health care workers (41%) were less affected with pandemic phobia than non health care workers (59%) probably due to their familiarity with COVID positive patients and news related to same. Fever, myalagia, diarrhoea, vomiting and headache was mostly seen in the age group 41-50 years while the sore throat was maximally seen in the age group 18-30 years. The age group more than 50 years most suffered with chest pain, palpitations, anxiety, depression and insomnia. Out of 300 subjects 208 (69.33%) suffered either anxiety or depression which appeared to be the most common symptom followed by chest pain and palpitations which was seen in 186 (62%) subjects. The symptoms of insomnia, sore throat, fever, headache and myalagia were seen in 166(55.33%), 152(50.66%), 147(49%), 132(49%) and 123(41%) subjects respectively. Diarrhoea (5.33%) was the least common symptom observed. Out of 300 subjects 176 were not vaccinated against COVID 19 and 123 (69.88%) of them were symptomatic while 124 subjects underwent vaccination and only 44 (35.48) of them were symptomatic. Thus vaccination became an important tool to allay the generalised phobia associated with COVID 19 pandemic. This study included 76 hypertensive patients out of which 41(53.94%) were symptomatic but 59 (86.76%) subjects out of 69 showed the symptoms who were suffering from diabetes mellitus. Diabetes mellitus emerged as dreadful co morbidity over hypertension adding to the phobia of COVID 19 pandemic due to the reason of susceptibility to multiple infections.

The present numbers and trends of post relaxation of COVID 19 regulations indicate that COVID 19 is our next public health disaster owing to few post infection syndrome which would add further to anxiety and morbidities of contacts to these patients **[9].**

V. CONCLUSIONS

Based on the findings of present study it concluded that total three hundred subjects were studied out of which most affected age group was 31-50 years. The symptoms of anxiety/depression followed by palpitations daunted the most, even the health care workers were not spared but their

number were less when compared to the non health care workers. Female subjects mostly were affected to this phobia of pandemic as compared to males. The background of COVID 19 vaccination added to the tenacity of the subjects against the psychological stress of this pandemic and got less affected when compared to those who did not get vaccinated. Co-morbidties like diabetes mellitus and hypertension are important co-factorsagainst COVID 19 pandemic.

Conflict of Interest : NIL
Funding Source : Not Required

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