Research Paper

A study to assess the level of depression during quarantine period of COVID-19 pandemic among general population in Chennai

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ABSTRACT

Background: The COVID-19, the recent public health crisis of global concern is challenging psychological capacity of the public to deal with the ongoing crisis (Wang et al., 2020). This is not applicable to individuals with COVID-19 only, but also those who are bound to be in quarantine for a long time during a lockdown. The outbreak of corona virus disease 2019 (COVID-19) feels stressful and depression among people. *Aim:* The main aim of the study is to assess the level of depression regarding quarantine during corona outbreak among a general population. *Methods:* Non-experimental cross-sectional research design was adopted with 100 participants who selected by purposive sampling technique at selected general population. The tool used for the study was Demographic variables and Beck Depression Inventory II (BDI – II) scale was sent through the internet by self-made online web sheet to fill and resend the components of demographic variables as well as Beck Depression Inventory II questionnaire. General populations are instructed to answer the appropriate options in demographic variables and BDI – II scale. *Results***:** Out of 100 samples 7 (7%) members had normal depression, 41 (41%) members had mild depression, 36 (36%) members had Moderate depression,16 (16%) members had severe depression for Covid-19 pandemic quarantine. *Conclusion:* The present study assessed the level of depression during the quarantine period of a corona pandemic among general population in Chennai. The results revealed that the mean score was 22.33 ± 9.95. From the findings of the study, the investigator concluded that although it is mandatory to follow quarantine to break corona chain, there is also a need to reduce depression levels to prevent mental crisis as well as depression related physical problems.

Keywords: Level of depression, Quarantine period, COVID-19 pandemic, General Population

T he COVID-19, recent public health crisis of global concern is challenging psychological capacity of the public to deal with ongoing crisis (Wang et al., 2020). This is not applicable to individuals with COVID-19 only but also those who are bound to be in quarantine for a long time during a lockdown. World Health Organization

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(WHO) declared the emergence of novel coronavirus as global public health emergency of on 30th January, 2020 (WHO, 2020b, 2020c) Coronaviruses are a group of related viruses that cause diseases in mammals and birds. In humans, corona viruses cause respiratory tract infections that can range from mild to lethal. COVID-19 has been the infectious disease caused by the most recently discovered corona virus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019.In January 2020 the World Health Organization (WHO) declared the outbreak of a new corona virus disease, COVID-19, to be a Public Health Emergency of International Concern. WHO stated that there is a high risk of COVID-19 spreading to other countries around the world. In March 2020, WHO made the assessment that COVID-19 can be characterized as a pandemic. WHO and public health authorities around the world are acting to contain the COVID-19 outbreak. However, this time of crisis is generating stress and depression throughout the population. The outbreak of corona virus disease 2019 (COVID-19) feels stressful and depression among people. Fear and anxiety about a disease can be overwhelming and cause strong emotions in adults and children. People can catch COVID-19 from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth, which are spread when a person with COVID-19 coughs or exhales. These droplets land on objects and surfaces around the person. Other people then catch COVID-19 by touching these objects or surfaces, then touching their eyes, nose or mouth. As the outbreak of corona virus disease 2019 (COVID-19) is rapidly expanding its limits being boundaries of all nations. Cases gets affected with corona virus increases day by day. Almost quarantine is implemented all over the nations to reduce the infective rate of this disease. Sudden changes in the life routine of people due to quarantine, affects physical health, mental health, financial status, routines etc. Fear and anxiety about the disease, extending of quarantine period, poor income status, less interaction with the society, loss of recreations, educational disturbances cause mild to sivere level depression among all age groups of people. In extreme levels, it may also have chances of suicidal thoughts and as well as attempts. Sudden altering in the mental status of the individual caused by sudden stoppage of alcohol intake, smoking cessation, income depletion affects his/her own health, family health as well as the society and Nation health. Although quarantine is the mandatory measure to follow to save human lives. There is an urge to read peoples mind about the current quarantine situations about their needs, health issues, change of behavior as well as suicidal thoughts. It further provides data to implement new strategies to build up a person mentally by government as well as other NGO committees.

Objectives of the study
1. To assess the level of depression regarding quarantine during corona outbreak among a general population.
2. To associate the level of depression regarding quarantine during a corona outbreak with their selected demographic variables.

METHODS AND MATERIALS

Non experimental cross sectional study was conducted to assess the level of depression regarding quarantine during corona outbreak among a general population. After obtaining the formal permission from the concerned authority. Explained the study in detail and obtained informed consent from study samples. The main study was conducted during the quarantine period of Corona pandemic attack at selected areas in Chennai. The data are collected during the month of May and June. The investigator first selected the sample by using purposive sampling technique who met the inclusion criteria. A total of 100 samples

was selected. Demographic variables and Beck Depression Inventory II (BDI – II) scale was sent through the internet by self-made online web sheet to fill and resend the components of demographic variables as well as Beck Depression Inventory II questionnaire. General populations are instructed to answer the appropriate options in demographic variables and BDI – II scale. The answers obtained from them are corrected and the data were analysed by using descriptive and inferential statistics. descriptive and inferential statistics. P values less than 0.05 were considered statistically significant. Confidentiality and anonymity were maintained throughout the study. Researcher was insisting and refer the most depressive people to take psychological consultations to cope up mental disturbances/crisis during the quarantine period.

RESULTS

Table1: Results revealed that frequency and distribution of demographic variables among general population in Chennai. Out of 100 samples regarding age 17(17%) of respondents are in the group of below 20 years,19(19%) of respondents are in the group of 21-30 years,17(17%) of respondents are in the group of 31-40 years,14(14%) of respondents are in the group of 41-50 years, 18(18%) of respondents are in the group are 51-60 years, 15(15%) of respondents are in the group are above 60 years. According to the sex, 62(62%) of respondents are male and 38(38%) of respondents are female. According to the Religion, 56(56%) of samples are Hindu,32(32%) of samples are Christian,12(12%) of samples are Muslim. According to the residential area of samples, 78(78%) of respondents are from urban area and 22(22%) of respondents from rural area. According to the marital status, 66(66%) of respondents are married, 27(27%) of respondents are un married and 7(7%) of respondents are widow. According to the types of family, 82(82%) of samples are belongs to nuclear family, 18(18%) of samples belongs joint family. According to the Household ownership, 42(42%) of samples are having own house, 58(58%) of samples are having rented house.

Table 1: Frequency and distribution of demographic variables among general population in Chennai.

S.NO	DEMOGRAPHIC VARIABLE	FREQUENCY	PERCENTAGE
1	**AGE**		
	Below 20 years	17	17%
	21-30 years	19	19%
	31-40 years	17	17%
	41-50 years	14	14%
	51-60 years	18	18%
	Above 60 years	15	15%
2	**SEX**		
	Male	62	62%
	Female	38	38%
3	**RELIGION**		
	Hindu	56	56%
	Christian	32	32%
	Muslim	12	12%
4	**RESIDENTIAL AREA**		
	Urban	78	78%
	Rural	22	22%

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S.NO	DEMOGRAPHIC VARIABLE	FREQUENCY	PERCENTAGE
5	**MARRIED STATUS** Married Unmarried Widow	 66 27 07	 66% 27% 07%
6	**TYPES OF FAMILY** Nuclear family Joint family	 82 18	 82% 18%
7	**HOUSEHOLD OWNERSHIP** Own house Rented house	 42 58	 42% 58%

Fig: 2 shows that frequency and percentage distribution of level of depression among general population. Out of 100 samples 7 (7%) members had normal depression, 41 (41%) members had mild depression, 36 (36%) members had Moderate depression,16 (16%) members had severe depression for Covid-19 pandemic quarantine.
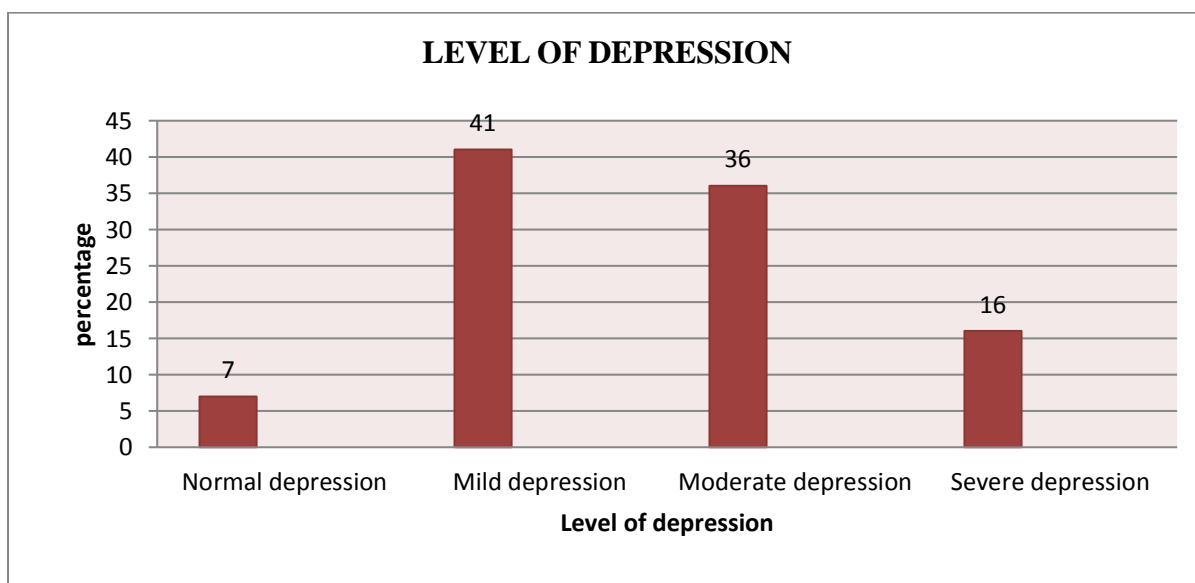

Fig: 2 shows that frequency and percentage distribution of level of depression among general population.

Table 2: Distribution of mean and standard deviation of level of depression among general population in Chennai.

SN	Level of Depression	Mean	Standard Deviation	Mean Percentage
1	Normal depression	11.43	1.1780	163.27
2	Mild depression	15.37	3.3258	37.48
3	Moderate depression	23.78	2.2987	66.05
4	Severe depression	41.69	4.6599	260.55

The mean value of normal depression was 11.43 with 1.17 standard deviation, mild level of depression mean was 15.37 with 3.325 standard deviation and moderate level of depression mean was 23.78 with 2.29 standard deviation. The Severe level of depression mean was 41.69 with 4.6599 standard deviation.

Table 3: Distribution of mean, standard deviation and p value of level of depression among general population.

Level of Depression	Mean	Standard Deviation
Statistical value	22.33	9.9459

The mean and standard deviation of level of depression for general population during covid-19 pandemic quarantine period. (TABLE 3)

TABLE 4: Association between the level of depression with selected socio demographic variables results revealed that statistically significant association with the level of depression for covid -19 quarantine at $p<0.00001$ and the other demographic variables had not shown a statistically significant association with level of depression for covid -19 quarantine. These findings were supported by a similar study conducted by Sharma **K, Saji J, Kumar R, Raju A (2020)** Psychological and Anxiety/Depression Level Assessment among Quarantine People during Covid19 Outbreak. The study results were out of 181 quarantined people, Socio-status of the participants is fairly effected may be due to restrict movement and conservative way of living during the quarantine period. 60.8% of participants become nervous some of the time, about 50% of participants shows the anxiety/depression symptoms, about 30% of the participants are somewhat affected by their sleeping patterns and about 35% participants are sometimes unsatisfied or slightly satisfied during the quarantine period.

TABLE 4: Association between the level of depression with selected socio demographic variables.

SN	Demographic variable	Normal depression		Mild depression		Moderate depression		Severe depression		Chi square values
		F	%	f	%	f	%	f	%	
1	**Age**									
	Below 20 years	3	3%	8	8%	4	4%	2	2%	X^2=19.7785 Df=15 P=0.180595 **NS**
	21-30 years	2	2%	11	11%	4	4%	2	2%	
	31-40 years	0	0%	5	5%	6	6%	6	6%	
	41-50 years	0	0%	4	4%	6	6%	4	4%	
	51-60 years	1	1%	8	8%	8	8%	1	1%	
	Above 60 years	1	1%	5	5%	8	8%	1	1%	
2	**Sex**									X^2=0.95253 Df=3 P=0.81273 **NS**
	Male	5	5%	27	27%	21	21%	9	9%	
	Female	2	2%	14	14%	15	15%	7	7%	
3	**Religion**									X=10.68518 Df=6 P=0.09860 **NS**
	Hindu	2	2%	19	19%	27	27%	8	8%	
	Christian	3	3	17	17	7	7	5	5	
	Muslim	2	2	5	5	2	2	3	3	
4	**Residential area**									X=7.816889 Df=3 P=0.04995 **S***
	Urban	3	3%	30	30%	31	31%	14	14%	
	Rural	4	4%	11	11%	5	5%	2	2%	
5	**Married status**									X=32.81592 Df=6

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SN	Demographic variable	Normal depression		Mild depression		Moderate depression		Severe depression		Chi square values
		F	%	f	%	f	%	f	%	
	Married	3	3%	19	19%	33	33%	11	11%	P=0.000011 S*
	Unmarried	2	2%	21	21%	2	2%	2	2%	
	Widow	2	2%	1	1%	1	1%	3	3%	
6	**Type of family**									X=4.37184 Df=3 P=0.22401 NS
	Nuclear family	5	5%	37	37%	29	29%	11	11%	
	Joint family	2	2%	4	4%	7	7%	5	5%	
7	**Household ownership**									X=4.44937 Df=3 P=0.21685 NS
	Own house	5	5%	18	18%	15	15%	4	4%	
	Rented house	2	2%	23	23%	21	21%	12	12%	

$p=0.00001$, S=significant, N. S= non-significant

DISCUSSION

The data collected was analyzed using descriptive and inferential statistics. Interpretation and discussion were done based on the objectives of the study, null hypotheses, and research studies from literature review. Study findings reveals that 7(7%) of respondents have normal depression level, 41(41%) of respondents have mild depression level, 36(36%) of respondents have moderate depression, 16(16%) of respondents have sivere depression level. The tables showed that the mean score of level of depression was 22.33 ± 9.9459. The study shows that there will be no significant association between the level of depression with the demographic variables such as age, sex, religion, type of family, household ownership. On the other hand, there will be a significant association between the level of depression with the selected demographic variables such as residential area, marital status. Currently, there is no published research reports examining the psychological impact and the response of the general public who are in home quarantine during the peak of the COVID-19 epidemic. Our study provides information about the level of depression that should be helpful for the concerned authorities to plan and adopt appropriate interventions to overcome the negative psychological impacts to ensure sound mental health, especially those in quarantine.

CONCLUSION

The present study assessed the level of depression during quarantine period of a corona pandemic among general population in Chennai. The results revealed that the mean score was 22.33 ± 9.95. From the findings of the study, the investigator concluded that although it is mandatory to follow quarantine to break corona chain, there is also a need to reduce depression levels to prevent mental crisis as well as depression related physical problems. The study can further assist in future research on psychological aspects of general population. The researcher insisted the people who have depression to follow mental health measures such as yoga, meditation, diverting minds on other household jobs, watching televisions, creativities etc.

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