



## **Assess risk factors associated with mental health symptoms among general population during corona pandemic**

**Bhuvanewari G<sup>\*1</sup>, Gowri R<sup>2</sup>**

<sup>\*1</sup>Associate. Professor, Department of Community Health Nursing, Saveetha College of Nursing, SIMATS, Thandalam, Chennai, Tamil Nadu, India

<sup>2</sup>B. Sc (N) IV Student, Saveetha College of Nursing, SIMATS, Thandalam, Chennai, Tamil Nadu, India

### **Abstract**

During any outbreak of an infectious disease, the population's psychological health play a crucial role in managing spread of disease and involvement of emotional distress during and after the outbreak. Resources are not provided to manage the mental health and wellbeing. During the acute phase of an outbreak, reducing the spread and critical Patient care, but psychological and psychiatric needs are not looked in these types of pandemic, where people's mental health should be concentrated more as these problems are especially vulnerable.<sup>2</sup> The present study to assess the risk factors associated with mental health symptoms among general population during corona pandemic in Ashok Nagar. A quantitative approach research design was used to conduct the study in Ashok Nagar, Chennai. 100 samples were selected by using purposive sampling technique. The present study depicts that general population between the age group of 26-30 years has severe mental illness symptoms impact on Covid pandemic and they have excellent knowledge on COVID-19 and moderate attitude towards the mental illness among the general population. In association none of the demographic variables has shown statistically significant with level of knowledge on covid-19 pandemic and attitude towards the mental illness symptoms among general population. At the level of  $p < 0.001$ .

**Keywords:** Knowledge, attitude, mental illness, general population, corona pandemic

### **Introduction**

In December 2019, China city experienced unusual pneumonia cases, which were related with a wet market for consumption of wild animals. In January 2020, these cases were reported by WHO and coronavirus were named as covid-19. In WHO, research and development department used diagnostic measures by using reverse polymerase chain reaction and genome sequencing for laboratory experiments. Due to the rapid rate of infections in mainland china, WHO announced worldwide health emergency. Many countries like North America, Europe and UK criticized WHO for delayed response and lack of specific health of covid-19. China suffered bulk of mortality until February 2020 but other countries like North America and Europe remained safe<sup>[1]</sup>.

During any outbreak of an infectious disease, the population's psychological health play a crucial role in managing spread of disease and involvement of emotional distress during and after the outbreak. Resources are not provided to manage the mental health and wellbeing. During the acute phase of an outbreak, reducing the spread and critical Patient care, but psychological and psychiatric needs are not looked in these types of pandemic, where people's mental health should be concentrated more as these problems are especially vulnerable<sup>[2]</sup>.

The local transmission from Wuhan city became one of the major catastrophes in last century. In March 2020, WHO declared covid-19 as a Public Health Emergency of International Concern (PHEIC)? This is sixth PHEIC under International Health Regulations. Government of India imposed safety restrictions but also many cases have been detected from all states mostly on the parts of West Bengal has its multicultural democracy, been a fertile ground for virus to spread faster. In these situations like health care workers come to play major role. Doctors, being in the front line of the system take the burnt the most. This situation is complicated due to complete uncertainty, lack of proper guidelines, fear, anxiety, etc. Overall Doctors have a higher stress level, anxiety and apprehension<sup>[3]</sup>.

All these pandemic situations created a lot of concern for people leading to highlighted levels of stress. Where anxiety is the common response to any stressful situation. An online survey was conducted using semi- structured questionnaires in which anxiety levels identified in the study was high<sup>[4]</sup>. Corona virus disease 2019 is a respiratory disease caused by the virus covid-19. This disease was first detected in China and is a highly infectious disease. The main symptoms of this disease are fever, dry cough, fatigue, dyspnea, etc. In China, 18.5% of patients are severely affected by covid-19, which is characterized by acute respiratory distress

syndrome, septic shock, and bleeding and coagulation dysfunction. Empirical clinical data have shown that overall case rate of covid-19 is lower than those of SARS, MERS and H7N9 [5].

According to the study (Ju-Hong Zhu, *et al.* 2020). Patients with severe mental illnesses (SMI) were struggling at high risk of infection during Coronavirus Diseases 2019 (COVID-19) pandemic. This study examined hospitalized SMI patients' attitude and knowledge towards COVID-19 infection. A cross-sectional program was conducted at five psychiatric hospitals located in Gansu province, the most rural area in China. Patients' attitude towards preventive measures and the knowledge of COVID-19 was measured by a self-report questionnaire.

A total of 925 hospitalized patients with SMI were recruited. Of them, 84.8% (95%CI: 82.4%–87.1%) had positive attitudes towards preventive measures of the COVID-19 outbreak. Being married (OR: 1.55, 95%CI: 1.05–2.30) and highly qualified level (OR: 1.63, 95%CI: 1.12–2.38) were independently associated with positive attitudes towards COVID-19 preventive measures, whereas higher educational level was associated with better knowledge of the COVID-19 outbreak ( $\beta$ : 0.231,  $P < 0.001$ ). Patients received COVID-19 relevant knowledge mostly from social media (58.9%), followed by their clinicians (33.2%). Most hospitalized SMI patients in economically underdeveloped areas in China showed positive attitudes towards COVID-19 preventive measures. However, public health education on COVID-19 relevant knowledge by mental health professionals was inadequate and less reachable to reduce the risk of transmission and infection. (Ju-Hong Zhu, *et al.* 2020) [6].

The prevalence of covid-19 are risk day by day, totally 186 countries are suffered with covid-19 problems, not only India. The government announced lockdown that the news is promoting extra mental health problems are extremely high in the Covid-19 pandemic period.

**Methods and material**

A quantitative approach research design was used to conduct the study in Ashok Nagar, Chennai. The prior permission was obtained from the RRB of Saveetha Institution of Medical and Technical Science (SIMATS). 100 samples were selected by using purposive sampling technique. The criteria for sample selection were adults who are willing to participate, who the people presently are living in the area, with both genders, between the age group from 19-50 years. The exclusion criteria for the samples are adults who have a history of psychiatric illness, very sick during the data collections, who does not cooperate in this study, and not willing to participate. The demographic data were collected using semi structured interview questionnaire, the level of mental health risk factors for assessed a check list questionnaire and the level of knowledge about the Covid-19 pandemic was assessed a self-Structured questionnaire, the level of attitude measured using Munroe multicultural attitude scale questionnaire with Likert Rating scale. The sample characteristics were described using frequency and percentage. Chi square was used to associate of level of knowledge and attitude among general population with selected demographic variables. The collected data was analyzed and discussed by using

descriptive statistics and inferential statistics.

**Results and Discussion**

**Section A: Demographic variable**

The major findings of this study shows that, most of the general population, 61(61%) were aged between 26 – 30 years, 81(81%) were Hindus, 89(89%) had father as head of the family were living with both parents, 58(58%) of mother/guardian had primary level of education, 62(62%) were private employees, 85(85%) had television as source of information and 61(61%) had income between 5,000 – 10,000.

The present study findings are supported to Suhaila Ghuloum, *et al.*, 2020 had conducted study on primary care and community health. The aim of this study to assess the knowledge, attitude and practice on mental illness. This is a cross - sectional survey from October 2008 to March 2009. A 2254 subjects surveyed, 49.6% were Qutaries, 50.4% other Arab expatriates, 54.8% of males and 45.2% of females. The majority of the respondents through that substance which abuse like alcohol or drugs could result in mental illness (84.7%). Some of the people believed that mentally challenged people are mentally retarded (40.6%). 48.3% believed that mental illness is the result of punishment from the GOD. he most common information sources on mental illness was media(64.2%). Common mental disorders in the study population were poor. (72.7%) [7].

**Section B: Assessment of level of mental illness symptoms risk factors on covid19 pandemic among the general population.**

The above the table 2 shows that 56(56%) had severe mental illness symptoms impact on covid-19 pandemic, 32(32%) had moderate mental illness and 12(12%) had mild mental illness.

The present study finding is supported to Yan Guo, *et al.*, the study was conducted to assess the mental health and disorder and associated risk factors during the Covid pandemic. The study design in cross sectional study was involved the participants aged 18 years or above. Out of 2331 participants, 762 (32.7%) came out with elevated anxiety or depressive symptoms. Nine risk factors are associated with anxiety or depressive symptoms includes younger age, reduced income, presence of cancer or other chronic diseases, family members diseased with cancer, symptoms related to COVID-19 infection for he/she or the family members, living alone, with family conflicts, having <3 or >8 hours of sedentary time per day, and worsened sleep quality. The finding is high risk for elevated anxiety or depression symptoms during the Covid- 19 pandemic [8].

**Table 1:** Frequency and percentage distribution of level of mental illness symptoms risk factors on covid-19 pandemic among the general population. N=100

Level of Mental Illness Symptoms	Frequency No.	Percentage %
Mild(0-3)	12	12%
Moderate(4-6)	32	32%
Severe(7-10)	56	56%

**Section C: Assessment of level of knowledge on covid-19 pandemic and attitude towards mental illness symptoms among the general population.**

The above table 3 shows that 64(64%) had excellent knowledge on Covid-19 pandemic, 31(31%) had good knowledge, 3(3%) had average knowledge and 2(2%) had poor knowledge. The above table 4 shows that 97(97%) had moderate attitude and 3(3%) had low attitude towards mental illness symptoms during Covid-19 pandemic.

The present study finding is supported to ROY, *et al.*, 2020 had conducted on Asian J psychiatry. The aim of this study to assess the knowledge, attitude in healthcare need in covid-19 pandemic. A web based survey was conducted employing a semi structured questions went to non - probability snowball sampling techniques. The study received 662 responses. Moderate knowledge about the COVID-19 infection and adequate knowledge about preventive aspects the attitude towards COVID-19 showed peoples' willingness to follow government guidelines on quarantine and social distancing. The anxiety level identified within the study was high. Quite 80 you look after the people were preoccupied with the thoughts of COVID-19 and 72% reported the necessity to use of gloves, also as sanitizers. During 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. The perceived mental healthcare need was present in greater than 80 you look after participants. There's a requirement to deeply intensify the notice and address the psychological state problems with the people during this COVID-19 Pandemic [4]. Another study which also supported the present study Bao-liang zhong, *et al.*, had conducted the aim of this study to measure has been adopted to control the rapid spread of the ongoing the covid-19. An online sample of Chinese residents. A self-developed online KAP questionnaire. It's carried the 12 questions regarding the covid-19 and 19 questions regarding the attitude and practice towards the covid-19. Almost the n=6910, 65.7% were women, 63.5% teenagers or above, and 56.2% engaged in mental labor. The accurate rate of knowledge questionnaire was 90%. 97.1% of the people had confidence that China would win the battle against COVID-19. Most of the participants (98.0%) wore masks when going out in recent days. Many logistic regression analyses, the COVID-19 knowledge score (OR: 0.75-0.90,  $P < 0.001$ ) was significantly associated with a lower likelihood of negative attitudes and preventive practices towards COVID-2019. Most Chinese residents of a relatively high socioeconomic status, in particular women, are knowledgeable about COVID-19, hold optimistic attitudes, and have appropriate practices towards COVID-19. Health education programs aimed at improving COVID-19 knowledge are helpful for Chinese residents to hold optimistic attitudes and maintain appropriate practices. Due to the limited sample representativeness, we must be cautious when generalizing these findings to populations of a low socioeconomic status [5].

**Table 2:** Frequency and percentage distribution of level of knowledge on Covid-19 pandemic among general population. = 60

Level of Knowledge	Frequency No.	Percentage %
Poor (0 – 5)	2	2.0
Average (6 – 10)	3	3.0
Good (11 – 15)	31	31.0
Excellent (16 – 20)	64	64.0

**Table 3:** Frequency and percentage distribution of level of attitude towards mental illness symptoms during Covid-19 pandemic among general population. N = 60

Level of Attitude	Frequency No.	Percentage %
Low ( $\leq 50\%$ )	3	3.0
Moderate (51 – 75%)	97	97.0
High ( $< 75\%$ )	0	0

**Section D:** Association of Level of Knowledge and attitude among general population with selected Demographic Variables.

The major finding of the study shows that none of the demographic variables had shown statistically significant association with level of knowledge on COVID-19 pandemic and none of the demographic variables had shown statistically significant association with level of attitude towards mental illness symptoms among general population, the significant value taken was  $P < 0.001$ .

The research finding is supported to Ganesh K, M. SC. Nursing (2011) had conducted study on knowledge and attitude of mental illness among general population. In this study was carried out on 100 people. In those 33% males and 67% females, most of them in the age group above 30 years. Knowledge score of the subjects was  $5.90 \pm 1.22$ . Awareness regarding mental illness is common mental disorders (60%), causes (35%), signs and symptoms of mental illness (60%), treatment (42%) and prognosis 30% and most of them had negative attitude towards mental illness. High knowledge score has been associated with male and aged between 18-30 years [9].

The also supported to the present study is H. Blaise Nguendo Yondsi (2015) had conducted study on assess the knowledge attitude and beliefs KAB of general public in cross sectional survey. For this study 944 adults are respond to the questionnaires. 67.7% have already heard or known someone who has suffered or is suffering from mental illness. Among them, 51.0% are males whereas 49.0% are females. A majority of the respondents was aged between 20–29 years (60.7%). 30.4% believed that mental illness can be treated. Recognition of common mental disorders in the population was poor (32.6%). Knowledge of mental illness among the general public was poor and suggests improving the needs for strong emphasis on public education to increase mental health literacy among general public to increase awareness and positive attitude of people towards mental illness [10].

**Conclusion**

The present study depicts that general population between the age group of 26-30 years has severe mental illness symptoms impact on Covid-19 pandemic and they have excellent knowledge on COVID-19 and moderate attitude towards the mental illness among the general population. In association none of the demographic variables has shown statistically significant with level of knowledge on covid-19 pandemic and attitude towards the mental illness symptoms among general population.

**References**

1. Bashir MF, Benjiang MA, Shahzad L. A brief review of socio-economic and environmental impact of Covid-19. Air Quality, Atmosphere & Health 2020;13(12):1403-

- 1409.
2. Cullen W, Gulati G, Kelly BD. Mental health in the COVID-19 pandemic. *QJM: An International Journal of Medicine* 2020;113(5):311-312.
  3. Chatterjee SS, Bhattacharyya R, Bhattacharyya S, Gupta S, Das S, Banerjee BB. Attitude, practice, behavior, and mental health impact of COVID-19 on doctors. *Indian Journal of Psychiatry* 2020;62(3):257.
  4. Roy D, Tripathy S, Kar SK, Sharma N, Verma SK, Kaushal V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian journal of psychiatry* 2020;51:102083.
  5. Zhong BL, Luo W, Li HM, Zhang QQ, Liu XG, Li WT *et al.* Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. *International journal of biological sciences* 2020;16(10):1745.
  6. Zhu JH, Li W, Huo XN, Jin HM, Zhang CH, Yun JD *et al.* The Attitude towards Preventive Measures and Knowledge of COVID-19 in patients with Severe Mental Illness in Economically Underdeveloped Areas of China. *Psychiatric Quarterly* 2021;92(2):683-691.
  7. Ghuloum S, Bener A, Burgut FT. Epidemiological survey of knowledge, attitudes, and health literacy concerning mental illness in a national community sample: a global burden. *Journal of primary care & community health* 2010;1(2):111-118.
  8. Guo Y, Cheng C, Zeng Y, Li Y, Zhu M, Yang W *et al.* Mental health disorders and associated risk factors in Quarantined adults during the COVID-19 outbreak in China: cross-sectional study. *Journal of medical Internet research* 2020;22(8):e20328.
  9. Ganesh K. Knowledge and attitude of mental illness among general public of Southern India. *Natl J Community Med* 2011;2(1):175-178.
  10. Yongsu HBN. Knowledge and attitudes towards mental health and mental illness among general public in Yaounde. *SAS Journal of Medicine* 2015;1(1):26-32.