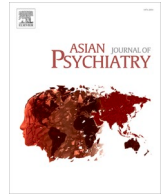




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Short communication

Assessment of mental health issues among geriatric population during COVID19 pandemic, Indian perspective

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ARTICLE INFO

Keywords:
COVID19
Depression
Geriatric
Anxiety
Elderly

ABSTRACT

Objectives: Study was aimed to assess magnitude of mental health problems among geriatric population during COVID19 pandemic.

Methodology: Study was a cross-sectional observational study, total of 106 participants (Age ≥ 60 years) of either gender included in study. Mental health variables depressive and anxiety were assessed using GDS and HAM-A. **Results:** On GDS, 20(18.87%) patients had depressive symptoms and on HAM-A, 24(22.6%) patients were having anxiety symptoms.

Conclusion: Study highlight that Geriatric population have significant mental health issues during COVID19 pandemic, it should not be overlooked. It's necessary to provide elderly psychological intervention measures to improve their wellbeing.

1. Introduction

Coronavirus disease 2019 (COVID19) was declared a pandemic on 11th March 2020 (World Health Organization, 2020). This COVID19 pandemic has rapidly taken over the health systems of the world due to its high contagion capacity. Pandemic has created a considerable degree of fear, worries, and concerns among all age groups. This consequently has a detrimental effect on the physical and mental wellbeing of the population, the elderly could not be spared from it (Ebrahim et al., 2020). At a later age, pre-existing comorbid medical conditions (like high blood pressure, asthma, heart problems, or diabetes) make the geriatric population more susceptible to COVID19 infection (Belluz et al., 2020).

In this pandemic, people are living in constant fear due to infection, death of loved ones, lockdown, and financial crisis. Such factors can precipitate mental health problems in healthy individuals (Ho et al., 2020). During pandemics, mental health problems like depression, anxiety, insomnia have been reported among the elderly in different studies from the developed nations (Robb et al., 2020; Wong et al., 2020; Giebel et al., 2021; Pieh et al., 2020; Nwachukwu et al., 2020).

Literature also reports that the geriatric population has greater severity of COVID19 and a high mortality rate than the young population, which can expose them to a higher risk of having mental health problems. Scarcity of the literature from developing countries especially from India has compelled us to explore the impact of COVID19 on the mental health of the geriatric population. This will help in developing long-term mechanisms and systems for protecting the psychological wellbeing of the elderly. To the best of our knowledge till now no study has been published from India to quantify and understand the impact of COVID19 on the mental health of the geriatric population.

Therefore, this study was planned to assess the impact of COVID19 on the mental health of the geriatric population. We aimed to address this knowledge gap by assessing the psychological symptoms.

2. Methodology

The present study was a cross-sectional observational study. It was conducted on geriatric population (Age ≥ 60 years) of either gender those who were registered and availing teleconsultation facility at tertiary health care facility of India, during COVID19 pandemic. Most

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<https://doi.org/10.1016/j.ajp.2021.102897>

Received 12 June 2021; Received in revised form 2 September 2021; Accepted 20 October 2021

Available online 28 October 2021

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patients were registered in our centre for one or another physical health problem like diabetes mellitus, hypertension, benign prostatic hyperplasia, chronic obstructive pulmonary disease, coronary artery disease, or any other neurological illness. Those patients who were using any substance other than tobacco in the dependent pattern were excluded from the study. The patients who were already registered in the dementia clinic and with pre-existing mental health conditions were excluded from the study (Teleconsultations being provided to only those patients who were already registered at the centre).

Verbal informed consent was taken from each individual after explaining the purpose and procedure of the study by the researcher. Those patients who were not willing to provide consent were excluded from the study. The study protocol was approved by the institute ethics committee (IEC-864/04.09.2020, RP-40/2020).

Amidst the scarcity of studies where no baseline Indian data was available on the COVID19 pandemic and its impact on the mental health of the geriatric population. We tried to recruit maximum subjects to strengthen our hypothesis. Study data were collected by the trained professionals and clinical psychologists.

3. Socio-demographic details

Basic sociodemographic profiles of all recruited participants were collected.

3.1. Hamilton Anxiety Rating Scale (HAM-A)

The HAM-A is one of the first rating scales developed to assess the severity of anxiety symptoms. The scale consists of 14 items, each group of symptoms rated on a Likert scale of zero to four, with four being the most severe condition. The sum of the total score was categorized with scores ≤ 7 that were considered to represent no/minimal anxiety, 8–14 mild anxiety, 15–23 moderate anxiety, and score ≥ 24 represent severe anxiety symptoms. This is a clinician-rated scale and takes 10–15 min. (Maier et al., 1988).

3.2. Geriatric depression scale (GDS)

GDS is a 30-item scale used to identify depression in the elderly. In the Geriatric Depression Scale, questions are answered "yes" or "no." One point is assigned to each answer and the cumulative score was rated on a scoring grid. The grid sets a range of 0–9 as "normal", 10–19 as "mildly depressed", and 20–30 as "severely depressed". (Yesavage et al., 1982).

4. Statistical analysis

Categorical variables were analysed using number and percentage, analysis of continuous variables was done by using mean and standard deviation. The association between qualitative independent variables was assessed using the Chi-square test or Fisher's exact test, p-value < 0.05 was considered as statistically significant. Statistical software, STATA/SE version 14.2 (StataCorp LP, College Station, TX, USA), was used in the analysis.

5. Results

5.1. Socio-demographic characteristics

One hundred six (106) registered participants were included in this study; all were under regular follow-up at the outpatient department of the tertiary health care centre of India. Among them 58 (54.72%) were males and 48 (45.28%) were females. The mean age of males was 67.60 (SD \pm 5.82) years and for females, it was 67.15 (SD \pm 4.17) years. In the present study 103(97.20%) patients were having ages between 60 and 79 years and only 3 (2.80%) patients had 80 years or above. Patients were having different education levels, among included patients, 9

(8.49%) were having professional education levels, 29(27.36%) were graduates, 8(7.55%) were intermediate pass, 17(16.04%) were high school pass, 12(11.32%) were middle school pass, 15(14.15%) were primary pass, and 16(15.09%) patients were illiterate. Ninety-eight patients (92.45%) were having family members as primary caretakers, 6(5.67%) were living alone, and 2(1.88%) patients were living in old age homes. Most patients were from urban 87 (82.08%) locality and others were from rural areas 19 (17.92%).

5.2. Depression and anxiety

On Geriatric Depression Scale, 20 (18.87%) patients had depressive symptoms out of them, 18 (16.98%) were having mild depressive symptoms and 2 (1.89%) were having moderate symptoms. On HAM-A, 24 (22.6%) patients were having anxiety symptoms, among them, 20 (18.87%) were having mild symptoms and 4 (3.77%) were having moderate symptoms. No significant association could be explored between illness severity and different demographic parameters e.g. gender, place of living, and education level.

6. Discussion

The present study highlight that the Geriatric population is not spared from the detrimental effect of this pandemic on mental health. This is the first study to quantify the impact of COVID19 pandemic on the mental health of the elderly from India. In this cross-sectional study, overall 18.87% elderly were having depressive symptoms and 22.6% were having anxiety symptoms. Findings of this study highlight that pandemic and associated restrictive measures had a significant impact on the wellbeing of the elderly. Findings from our study have a variance from the findings of other studies, e.g. study from the United Kingdom reports 9.2% elderly depressive symptoms and 15.3% anxiety symptoms (Robb et al., 2020), a study from Hong Kong reports depressive symptoms in 27.69% and anxiety in 27.3% elderly (Wong et al., 2020). Given the severity of symptoms present study reports moderate depressive symptoms in 2 (1.89%) and moderate anxiety in 4 (3.77%) elderly. However, studies in the literature have reported a higher level of moderate-severe depressive and anxiety symptoms in the elderly e.g. Giebel et al. (2021) (5% Depression and 5% Anxiety), Pieh et al. (2020) (5.36% Depression and 6.8% Anxiety), and Nwachukwu et al. (2020) reported 26.4% Depression and 23.3% Anxiety). This difference in the estimated prevalence of mental health problems in the elderly could be attributed to individual country's health care infrastructure, living conditions of the elderly, extent and severity of the COVID19 pandemic, government support to the family of the diseased, public health system, and income level. There could be an uneven ability to adapt to adverse life events, depending on cultural, social, economic, and individual factors.

Although many of us agree that mental health problems among the elderly during and after the pandemic is an important aspect that should not be overlooked. This preliminary data from a small sample size can guide us to explore further to understand the impact of the pandemic on a larger population. There is a need to identify risk and protective factors which can modify the course of mental health problems. A modified public mental health approach is needed for better prevention and intervention e.g. teleconsultations can be explored and evaluated by providing psychological intervention measures with a special focus on the elderly in need.

The study has its limitations due to the small sample size findings may not be generalizable. There could be selection bias as participants with severe illness may have refused to participate. Due to the unavailability of baseline parameters direct causal association may not be established. Further due to the limited sample size study might not have been able to demonstrate any significant causal association between illness severity and sociodemographic variables. Multiple factors may have contributed to the illness which needs to be explored in a large

sample size study.

7. Conclusion

The geriatric age population experienced notable mental health issues. Our findings guide us that it's important to pay focus on the geriatric population to address their mental health issues for their psychological wellbeing and good quality of life.

References

- Belluz, J., 2020. China's cases of Covid-19 are finally declining. A WHO expert explains why. Published 2020. Updated 3 March. Accessed 4 April Vox. (<https://www.vox.com/2020/3/2/21161067/coronavirus-covid19China?fbclid=IwAR0qEmxPzXhRUGlStSye7DC-RY7gTvywXH8MCZPVqPweZtdFSggiNDgKY>). Published 2020. Updated 3 March. Accessed 4 April.
- Ebrahim, S.H., Ahmed, Q.A., Gozzer, E., Schlagenhaut, P., Memish, Z.A., 2020. Covid-19 and community mitigation strategies in a pandemic. *BMJ* 368, m1066.
- Giebel, C., Lord, K., Cooper, C., Shenton, J., Cannon, J., Pulford, D., Shaw, L., Gaughan, A., Tetlow, H., Butchard, S., Limbert, S., 2021. A UK survey of COVID-19 related social support closures and their effects on older people, people with dementia, and carers. *Int. J. Geriatr. Psychiatry* 36 (3), 393–402.
- Ho, C.S., Chee, C.Y., Ho, R.C., 2020. Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Ann. Acad. Med. Singap.* 49 (1), 1–3.
- Maier, W., Buller, R., Philipp, M., Heuser, I., 1988. The Hamilton Anxiety Scale: reliability, validity and sensitivity to change in anxiety and depressive disorders. *J. Affect. Disord.* 14 (1), 61–68.
- Nwachukwu, I., Nkire, N., Shalaby, R., Hrabok, M., Vuong, W., Gusnowski, A., Surood, S., Urchuk, L., Greenshaw, A.J., Agyapong, V.I., 2020. COVID-19 pandemic: age-related differences in measures of stress. *Anxiety Depress Can. Int. J. Environ. Res. Public Health* 17 (17), 6366.
- Pieh, C., Budimir, S., Probst, T., 2020. The effect of age, gender, income, work, and physical activity on mental health during coronavirus disease (COVID-19) lockdown in Austria. *J. Psychosom. Res.* 136, 110186.
- Robb, C.E., de Jager, C.A., Ahmadi-Abhari, S., Giannakopoulou, P., Udeh-Momoh, C., McKeand, J., Price, G., Car, J., Majeed, A., Ward, H., Middleton, L., 2020. Associations of social isolation with anxiety and depression during the early COVID-19 pandemic: a survey of older adults in London, UK. *Front. Psychiatry* 11, 11.
- Wong, S.Y.S., Zhang, D., Sit, R.W.S., Yip, B.H.K., Chung, R.Y.N., Wong, C.K.M., Chan, D. C.C., Sun, W., Kwok, K.O., Mercer, S.W., 2020. Impact of COVID-19 on loneliness, mental health, and health service utilisation: a prospective cohort study of older adults with multi-morbidity in primary care. *Br. J. Gen. Pract.* 70 (700), e817–e824.
- World Health Organization. How to cope with stress during 2019-nCoV outbreak. Available at (<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>), accessed on 11.06.2021.
- Yesavage, J.A., Brink, T.L., Rose, T.L., Lum, O., Huang, V., Adey, M., Leirer, V.O., 1982. Development and validation of a geriatric depression screening scale: a preliminary report. *J. Psychiatr. Res.* 17 (1), 37–49.