The Association of Stress and Eating Patterns in Geriatrics Living With and Without Family during COVID-19

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ABSTRACT: The COVID-19 pandemic has been especially hard on the elderly because of their particular vulnerability to the virus. This virus causes worse outcomes in older adults, especially those with comorbidities. Their confinement to forestall the spread of the virus resulted in social isolation, often linked to the unwanted loneliness that hinders their emotional well-being. Loneliness might be a risk factor for physical deterioration. Family and social support is also vital for the betterment of the elderly. Due to financial constraints, some older persons who live alone do not prepare complete, balanced meals, placing them at danger of malnutrition. Malnutrition remains one amongst the foremost serious health problems for older people worldwide. Many factors contribute to malnutrition in older people, including: loss of appetite, dementia, frailty, poor dentition, swallowing difficulties, social isolation, and poverty. The COVID-19 pandemic represents an oversized impact on human health, causing sudden lifestyle changes, through social distancing and isolation reception, with social and economic consequences. Besides the physiological risk, various social factors like lack of security, loneliness, isolation, ageism, sexism, dependency, stigma, abuse and restriction to health care access were identified as crucial in pandemic situations. A stratified random sampling method was used to select the sample. An online survey was conducted through Google forms from elderly aged 60 years or more, residing in India, including both genders. Overall, this study result concluded that geriatrics living with family have less chances of malnutrition.

INTRODUCTION:
In 2021, India had an estimated 138 million senior citizens, with 67 million males and 71 million females. In 2021, a virus known as COVID-19 originated in Wuhan, China. COVID-19 affects all age groups and people, the elderly population (those over the age of 60) were the most vulnerable. The aging population is involved in the majority of instances and fatalities in every country throughout the world, and the numbers increase with age. The number of reported cases and deaths continued to rise after the World Health Organization declared a pandemic in March 2020 (Lee et al., 2021).

According to the first Longitudinal Aging Study in India (LASI) announced by the Union Ministry of Family and Health Welfare on January 6, 2020, two out of every three elderly adults in India suffer from a chronic condition. According to the survey, around 23% of the elderly population (aged 60 and up) had multi-morbidities, with elderly women being more likely to have such disorders. The survey's findings included information from over 42,000 homes and over 72,000 older people from all states and union territories except Sikkim. Cardiovascular disease (CVD) and hypertension are the most common chronic health problems in people aged 75 and up. The presence of comorbidities including obesity, diabetes, hypertension, cardiovascular, lung disease, and cancer accompanied by an impaired immune system and tissue damage predisposes to the significantly higher rates of mortality in this group (Bajaj et al., 2021).

Due to this pandemic situation, the government and public health announced a lockdown and many restrictions on daily living, including isolation, social distancing, and home quarantine, which indirectly changed an individual's daily habits, including lifestyle-related behaviors. And this situation had important psychosocial effects, such as health anxiety, panic, stress, anxiety, insomnia, and depression. The geriatric population may be exposed to these effects more because they are sensitive and vulnerable (Yildirim et al., 2021).

While entering old age is something to be proud of, the elderly undergo a number of challenges that we should all be aware of. Elderly people with physical or cognitive disabilities, as well as those with low incomes or a lack of social support, are among the groups most at risk of injury, death, or the development of post-disaster health disorders like COVID-19.The elderly individuals who were not able to meet their family members due to COVID-19 or lived alone as their children were out of the country showed an increased level of stress and anxiety. They also felt lonely and lacked social support, with depressive symptoms. COVID-19 produced 1.5 times more stress than Middle East Respiratory Sickness (MERS) and 1.4 times more stress than local earthquakes, when compared to other disasters. The negative effects of COVID-19 on mental health are thought to be more widespread and intense than those of previous epidemics, putting national mental health at danger (Lee et al., 2020).

Fear and panic caused by COVID-19 spread more rapidly than the pandemic itself. If COVID-19 penetrates the human body and paralyzes the lungs, the organ of life; the fear of the virus invades the brain, the control tower of the human body, and paralyzes reasoning. The fear of the virus extended to the entire population, not just those who were infected or who worked directly with the infected. As a result, it's critical to evaluate and identify the psychological ideas and protective aspects that underpin and form these guidelines and methods, as well as to provide practical suggestions and guidelines to ensure the psychological health of the elderly

during COVID-19 (Lee et al., 2020). Many elderly individuals who were alone at home were not able to cook food, so they depended on the cook, the tiffin system, or something else. Many were financially unstable and could not afford food which led to malnutrition in the elderly population.

Overall, all these changes have caused a spike in the rate of malnutrition among the elderly. Malnutrition is widespread in older people and represents a major geriatric syndrome with multifactorial etiology and severe consequences for health outcomes and quality of life. Insomnia and the risk of malnutrition were found in 18.29 percent and 48.17 percent of the elderly, respectively. Malnutrition was more common in females (16.67 percent), clinics (28.87 percent), metropolitan regions (19.29 percent), and India's northern region (27.37 percent) (Kushwaha et al., 2020).

Malnutrition in older adults has long been considered as a critical health concern linked to high mortality and morbidity, as well as physical decline, which has wide-ranging acute repercussions for daily activities and overall quality of life. Malnutrition is widespread in older persons and may have a role in the onset of geriatric disorders. Malnutrition in the elderly is manifested by involuntary weight loss or a low BMI, but hidden deficiencies such as micronutrient deficiencies are more difficult to detect and, as a result, are usually missed in community-dwelling seniors. Disease is the leading cause of malnutrition in industrialized countries, as both acute and chronic diseases can cause or exacerbate malnutrition. As a result, because advanced age is a risk factor for disease, older persons are more likely to be nutritionally vulnerable or malnourished. Malnutrition has a complicated and multifaceted cause, and the onset of malnutrition in the elderly is most likely encouraged by aging processes (Norman et al., 2021).

METHODOLOGY:
A stratified random sampling method was used to select the sample. An online survey was conducted through google forms from elderly aged 60 years or more than 60 years residing in India, including both genders. Due to the COVID -19 pandemic a lockdown had been imposed and hence it was not feasible to conduct a research for the subjects physically. An online survey method using a pretested Questionnaire was conducted. Total 200 subjects including both with family and without family were included in the survey. Anthropometric measurements were taken by measuring their height, weight and calculating their BMI.

The MNA was developed specifically for the elderly and consisted of 7 questions. MNA tool was used to identify those who were malnourished or at risk of malnutrition. The MNA incorporates the 3 cut-off points for nutritional status from the full MNA, thus allowing the identification of those who are malnourished with just 6 questions. The data was analyzed statistically using the SPSS software, version 16. Descriptive analysis was carried out for statistical analysis.

RESULTS AND DISCUSSION :
50% of the participants were male and 50% of them were female. The majority of the participants were from the age group of 60-65 years. 82.81% (n=159) of the participants stayed with their family during the lockdown and 17.19% (n=33) of the participants did not stay with the family. Those who did not stay with the family lived in separate houses away from their children or in old age homes.
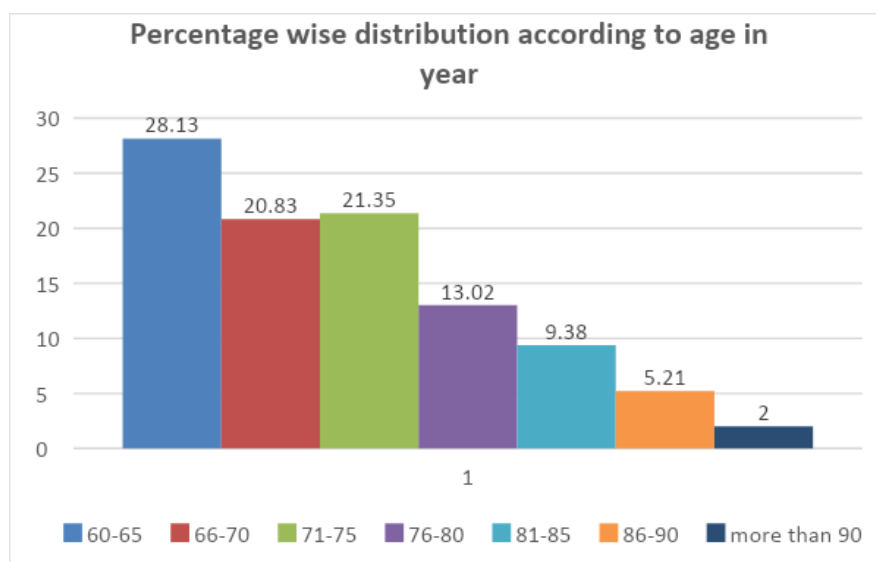

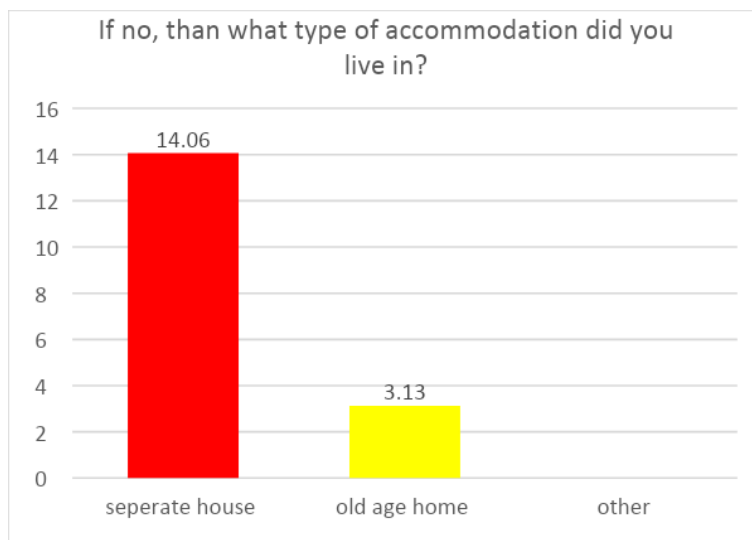**Figure 1: Percentage wise distribution according to age in years**

Figure 2- Type of accommodation

Mini Nutrition Assessment Score	Frequency	Mean (SD)
12-14 points: Normal nutritional status	78 (40.62%)	
8-11 points: At risk of malnutrition	84 (43.75%)	10.4 $\pm$2.89
0-7 points: Malnourished	30 (15.62%)	

Table 1: MNA score

The above table clearly shows that 78 participants had a normal nutritional status as per the MNA form. However, 84 participants (43.75%) were at a risk of malnutrition and 30 participants (15.62%) were malnourished. The table below shows that the presence or absence of family members played a significant role in the malnourishment status of the elderly. Even though the percentage of participants affected due to absence of family members is low, there is significant data to focus on.

	Frequency (Percentage)	Frequency (Percentage)	Mean (SD)	Mean (SD)
Nutritional Status	Presence of family	Absence of family	Presence of family	Absence of family
Malnourished	24 (15.1%)	6 (18.2%)		
At risk of malnutrition	67 (42.1%)	17 (51.5%)	10.48 $\pm$2.89	10.03 $\pm$3.1
Normal nutritional status	68 (42.8%)	10 (30.3%)		

Table 2: Effect of presence and absence of family on nutritional status

	Frequency (Percentage)	Frequency (Percentage)	Mean (SD)	Mean (SD)
Level of stress	Presence of family	Absence of family	Presence of family	Absence of family
Mild	23 (14.47)	1 (3.03)		
Moderate	124 (77.98)	29 (87.88)	15.83 +4.68	17.15 +4.3
Severe	12 (7.55)	3 (9.09)		

Table 3: Effect of presence and absence of family on level of stress

Eating Patterns

Food preference	Frequency & Percentage
Who cooked meals for you?	
Spouse/partner	27 (14.06)
Maid	10 (5.21)
Myself	32 (16.67)
Family member	111 (57.81)
Mess/Tiffin system	12 (6.25)
Did you skip any of the main meals?	
Yes	26 (13.54)
No	120 (62.50)
Rarely	46 (23.96)
If you answered yes to the previous question then why?	
Unable to cook	3 (1.56)
Unavailability of food	6 (3.13)
No maid	2 (1.04)
Less Appetite	9 (4.69)
Unavailability of Resources	6 (3.12)

Table 7 Eating patterns of participants

The above table data showed that the presence and absence of family had a significant effect on the level of stress. It can be seen that a moderate amount of stress is experienced by elderly living with and without family members.

Majority of the participants were dependent on someone else for their daily meals. It can be observed that a family member, spouse/partner, maid or even a tiffin system was what they relied on. 13.54% of the participants regularly skipped meals. This was due to staying alone from family where they had no one to cook for them or even unavailability of resources to cook food by themselves or simply loss of appetite. Thus, it can be gathered that the presence of family members did play an important role in the nutrition of the elderly. All these factors could have been responsible for the level of malnourishment shown in the MNA form.

SUMMARY AND CONCLUSION:

The lockdown measures have had a great impact on everyday life, often associated with a negative influence on psychological well-being. These circumstances have exacerbated a series of psychological and psychopathological conditions. The elderly have been severely affected due to the pandemic. Whether they were living with or without family during the lockdown has had a huge impact on their wellbeing and risk of malnourishment. Several factors have been studied which may have led them to eat less food than expected. Also, the level of stress was impacted. This indicates that there is a need to study this population of our society in great detail with a huge sample size, to understand how COVID-19 has impacted the elderly.

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