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Physical And Psychological Impacts Of COVID-19 On Elderly People

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Abstract

This research aims to analyze the physical and psychological impacts of COVID-19 on the elderly. It uses qualitative and quantitative approaches to raise the standards and authenticity of the research and both primary and secondary data has been incorporated. A survey of 300people was conducted through a close-ended questionnaire. Respondents were selected through convenience sampling out of which 30% of people had COVID-19. Logistic regression was done to calculate the impact of COVID-19 on the physical and mental health of people that has age 50 years or above. The effects of this disease were found to be physical as well as psychological. Older people are more vulnerable to this disease as they have a lower immunity factor. Most of the older people are likely to have chronic diseases like diabetes, cardiovascular issues etc. which makes them even more vulnerable as this disease attacks the respiratory system and the condition of patient can get worse in almost no time. Social distancing is the key defense technique for this disease and social distancing for older people means loneliness which consequently increases anxiety. It has been concluded in this research that the recent Coronavirus pandemic has affected all segments of the population throughout the world, but old age people are the ones who are highly affected. Old age people have faced the most critical stages of this disease both physically and psychologically due to several different reasons. Covid-19 has the impact of 1.2 times on Metal Health and 1.6 times on the Physical Health of Elderly people.

Keywords: COVID-19, Impacts of COVID-19, mental health, elderly aged people, Coronavirus, impacts, mental health.

Introduction

Coronaviruses have very high resemblance factors with one another in both chemical structure and morphology. Only upper respiratory infections have been identified as a major issue as far as humans are concerned, infections like, common cold with symptoms like difficulty in breathing.

It enters the nose or mouth via airborne droplets and invades the respiratory tract. The effects of this virus only start to get noticeable after 3 to 14 days of an incubation period. Corona

viruses are pleomorphic or spherical shaped particles which contain positive-sense (single-stranded) RNA. Corona viruses identify as the member of Coronaviridea family. Human corona viruses mostly fall into either 229E-like or OC43-like. They are tremendously fastidious and can grow only in differentiated respiratory epithelial cells, locally in the cells of the ciliated epithelium which damages cells and cause inflammation (Fehr & Perlman, 2015). Moreover, Mucociliary activity is a naturally designed phenomenon for clearing the airways of particulate material. Antibodies in nasal secretion are common and these antibodies help them in avoiding the infection (Du, et al., 2016). So far persistency of the immunity is not assured, and an infected person can be re-infected in the next wave or within a year. The diagnosis of COVID can also be made through laboratory tests based on antibody titers which are present. Paired sera and isolation of Coronavirus is impossible (Banerjee, 2020). Up till date, there are no definite medications that for definitive treatment, but a combination of drugs is being used to treat the infected patients and several protocols are being set in. Struggling with higher risk and lack of ability to support themselves in the isolation are the most faced problem by the older people in COVID-19. Older people are weak and more vulnerable to this disease. They are also at the greater risk of mental health illnesses owing to the current pandemic situation. The researcher has identified a number of factors which has badly affected the elderly. Anxiety, depression, stress, sense of loss and fear of health has been identified as the prominent psychological impacts of COVID-19 on elderly whereas lethargy, tiredness, malaise, and a general ill feeling are found to be common physical impacts of COVID-19 on elderly.

Research Objective

The study aims to analyze the impact of COVID-19 on the Mental and Physical health of Elderly people.

Hypotheses

They study has established two hypotheses to analyse impact of COVID-19 on mental & physical health of patient who had suffered from COVID-19.

Ho_1: COVID-19 disease has no impact on Mental Health of COVID-19 patient.
H_1: COVID-19 disease has significant positive impact on Mental Health of COVID-19 patient.
Ho_2: COVID-19 disease has no impact on Physical Health of COVID-19 patient.
H_2: COVID-19 disease has significant positive impact on Physical Health of COVID-19 patient.

Methodology

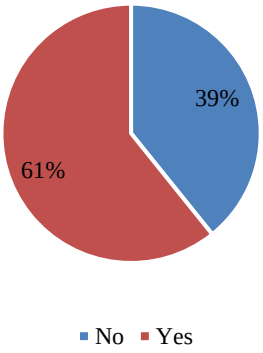
The study has employed a qualitative and quantitative approach to achieve the objective. The data was collected through a primary and secondary source. The primary data was collected through a survey and analyzed through software i.e., Statistical Package for Social Science (SPSS). An electronic copy of a close-ended questionnaire consisting of questions about COVID-19, Physical and mental health of elderly people was distributed to respondents via email, WhatsApp. The respondents hav**e** age of more than 50 years were selected through

convenience sampling for an interview. All the selected respondents were asked for their consent about to be a part of survey regarding COVID-19 disease and its effect. A total of 300 people were interviewed. Moreover, itis analyzed the only 30% respondents had COVID-19. Logistic regression was used to calculate the impact of corvid-19 on Mental & Physical health of elderly people. The secondary data was collected through the review of past research article published in the domain of covid-19. A total of 18 published research papers have been included in this research to prepare a review and identify the physical and psychological impacts of COVID-19 on elderly.

Analysis and Result

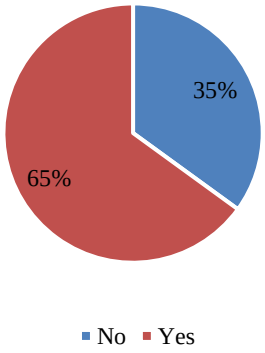
39% respondent believed that they are facing mental health issue after their recovery from covid-19. 61% respondents belied that they are not facing any issue after their recovery from COIV-19 (See figure 1)

Figure 1
Proportion of Patient believe they are suffering from Mental Health issues due to COVID-19



35% respondent believed that they are facing Physical health issues after their recovery from Covid-19. 65% respondents believed that they are not facing any Physical health issue after their recovery from COIV-19 (See figure 2)

Figure 2
Proportion of Patient believe they had recevied Physical Health Impact due to COVID-19



Logistic Regression Analysis

Covid-19 impact on Physical Health

Model Summary for Covid-19 impact on Physical Health explain only 3% variation in Physical health of elderly people due to COVID-19 disease. There may be other factors which are affecting Physical health of respondents. Analysis of Variables in the Equation for Physical Health shows COVID-19 disease has 1.6 times impact on Physical Health of elderly people. The one time rise in COVID-19 disease will increase 1.6 times Physical Health issues to elderly people (See Table 1).

Table 1: Analysis of Variables in the Equation for Physical Health

	B	S.E.	Wald	df	Sig.	Exp (B)
COVID-19 (1)	0.497	0.257	3.733	1	0.053	1.645
Constant	0.181	0.207	0.766	1	0.382	1.187

Covid-19 impact on Mental Health

Model Summary for Covid-19 impact on Mental Health explain 2.7% variation in Mental health of elderly people due to COVID-19 disease. There may be other factors which are affecting mental health of respondents. Analysis of Variables in the Equation for Mental Health shows COVID-19 disease has 1.2 times impact on Mental Health of elderly people. The one time rise in COVID-19 disease will increase 1.2 times mental health issues to elderly people (See Table 2).

Table 2: Analysis of Variables in the Equation for Mental Health

	B	S.E.	Wald	df	Sig.	Exp (B)
COVID-19 (1)	0.217	0.249	0.758	1	0.038	1.242
Constant	0.181	0.207	0.766	1	0.382	1.198

Discussion

Impacts of COVID-19 on Elderly

The impact that this pandemic has had on the elderly population can be broadly classified into two categories. First, there is an impact on their physical health that manifests itself in the form of physical deterioration of health. Secondly, there is an impact on mental health that directly influences and challenges the mental state of this population.

Impact on Physical Health

Studies further conclude that the impact of COVID-19 on physical health is noted to be greater on extremes of ages, which includes the elderly (Banerjee, 2020). This is due to several reasons that range from compromised immunities to underlying co-morbids.

Common Effects of COVID-19

When we speak of the effects of COVID-19 on the elderly, we would first refer to the effects that are common to other age groups as well. The disease presents with flu-like symptoms, which are usually very mild. But even these symptoms can last for weeks, without a particular indication of resolving.

Common symptoms that this disease presents with are; an onset of fever, a persistent cough, headache or a general body ache, and diarrhea. In most patients, these symptoms present with a mild severity that can be managed at home and treated symptomatically (Huang, et al., 2020).

There are a number of other mild symptoms associated with COVID-19 that may go by undetected in the older age as normal findings. These symptoms include nausea, diahorrea, malaise, lethargy, and a considerable amount of sputum production (Huang, et al., 2020).

Living With Co-Morbid

While the existence of pre-existing conditions may allow the disease to present itself with greater severity, COVID-19 itself can have a great impact on the elderly and their pre-existing medical conditions. Here is the impact of the pandemic on those living with co-morbidities.

Hypertension

Accordion to a study a significant rise in hypertension is seen in patients of older age, who already had issues of high blood pressure. It was also observed that a number of medications, being utilized for the treatment of COVID-19 lead to create an impact on the renin-angiotensin system that eventually lead to a rise in blood pressure of hypertensive patients (Tedeschi, et al., 2020).

Alzheimer's disease and Related Dementias

Individuals with ADRD are at greater risk because they may not be able to take care of all the precautionary measures as well as other individuals[7]. Patients with ADRD are already known to have a greater number of comorbidities, the occurrence of which also puts them at greater risks.

Parkinson's disease

Since the patients with Parkinson's lack the cognitive operation for appropriate adaptation, adaptation becomes physiologically harder for such elderly patients. Elderly patients, with Parkinson's, in such cases may experience worsening of symptoms. The stress may also result in a dopaminergic cell loss, which also worsens the pre-existing condition (Helmich, et al., 2020).

COPD and Other Respiratory Diseases

A number of these diseases, such as COPD and lung cancers are associated with age (Zhao, et al., 2020). A study showed that 6 out of 10 COPD patients, who had COVID, were reported dead. Since the disease may progress to cause fibrosis of the lungs, the progression of COPD may worsen as well, leading to great health risks for such patients (Zhao, et al., 2020). This impact could lead to respiratory failure in patients with COPD.

Diabetes Mellitus

Elderly, with diabetes mellitus, are also likely to have an underlying heart condition. And this condition may be worsened by the impact of COVID-19. One of the most notable damage, caused by COVID-19 is the hyper inflammatory syndrome that it causes (Desai, et al., 2020).

Physical Impact of Isolation

While in isolation, it is recommended for individuals to take small walks or spend time in open spaces within the boundaries of one quarantine area. But not everyone may find sufficient space within their home for taking walks while receiving a good supply of fresh air. This inactivity itself gives rise to a feeling of lethargy, tiredness, malaise, and a general ill feeling, that is not associated with any of the, possibly, underlying conditions. This may induce exacerbation of underlying diseases. Patients with Parkinson's that fail to perform sufficient motor activity have been observed to portray a deterioration of their motor functions (Helmich, et al., 2020). Similar is true for patients with underlying cardiac disorders and those with arthritis who need an appropriate amount of exercise and activity to stay healthy (Sweeting, et al., 2016).

Impact on Mental Health

With the current situation, isolation and uncertainty have created further challenges for adaptation that have significantly affected the mental health of the elderly.

Increased Dependency

There will be a post-pandemic world where elderly at home will no longer receive the greater attention that they are during the pandemic. But given the length of the pandemic, by the time that happens, there would be an increase in dependency of the elderly on others. The lack of the same attention and care would then lead to a great rise in anxiety, depression, and frustration.

Impact on Medically Compromised

According to survey it has been observed that the elderly that are known to have pre-existing medical conditions suffer a greater impact on their mental health (Zaho, et al., 2020). Lack of exercise and social engagement can lead to a severe impact on mental health that could be very hard to recover from (Brown, et al., 2020)

Anxiety, Depression and Stress

The elderly finds the current situation to make them more anxious and stressed due to a number of reasons (Lopez, et al., 2020). It was observed in a recently conducted study that individuals that were aged above 60 years showed to have the most psychological distress due to the pandemic (Qiu, et al., 2020).

Uncertainty

Another factor that contributes to anxiety in older individuals is the uncertainty of the situation (Banerjee, 2020). The lack of certainty creates room for anxiety and over thinking that may lead to insomnia and deterioration of physical well-being. Reversely, in individuals that are already dealing with these conditions, uncertainty, only makes things worse, leading to spiraling mental health, which only gets worse.

Fear of Health

Individuals that are safe and had not contracted the disease are found to be in the constant fear of being infected (Pragholapati, 2020). Individuals that had to be hospitalized due to their disease were found to be a lot more anxious than those who were not (Kong, et al.,2020). 34.72% of the hospitalized patients, according to Kong et al. (2020) were found to be highly anxious and 28.47% of them were found to be depressed. Social support and family infection were found to be the most common factors triggering anxiety and depression in these.

Sense of Loss

There are a considerable number of deaths around the world at the hands of this pandemic. Hearing about such great number of deaths creates a sense of loss amongst the population (Holmes, et al., 2020).

Impacts of Isolation on Mental Health

Isolation brings with itself, feelings of loneliness, and depression (Banerjee, 2020). Not being able to be with loved ones, creates a feeling of being incomplete that can have great impact on one's mental health (Zaho, et al., 2020).

According to Mehra et al. (2020), the COVID-19 pandemic has brought about a relapse of symptoms in such symptoms, triggered by excessive anxiety due to the infection. Mehra et al. (2020) followed two cases of such individuals who experienced a relapse. One was a 72-year-old man and 60-year-old female who had been maintaining mental health very well for years till the pandemic hit the world, after which he progressed into syndromal depression (Mehra, et al., 2020).

The older generation does not feel comfortable connecting digitally, like the younger generation (Banerjee, 2020). So, this is a coping mechanism rendered useless for those of older age, leaving them to feel lonely and alone, which may have ill-effects like insomnia.

Conclusion

It has been concluded that the impacts of COVID-19 on elderly are both physical and mental, and both have devastating consequences over older people. Due to the age factor, weak immunity and mostly due to the history of chronic diseases this virus affects them the most. With the increase in age not only immune system grows weaker but co-morbid effect increases as well. Covid-19 has impact of 1.2 times on Metal Health and 1.6 times on Physical Health of Elderly people.

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Author Contribution

Dr Farah Iqbal: Research Design, Discussion, Formulation of Paper
Ms Mahrukh Amjad: Data Collection and Result and Analysis

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