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## Impact of COVID-19 Lockdown on Continuation of Treatment among the OPD Geriatric Patients

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ABSTRACT

The aim of the study was to identify the impact of COVID-19 lockdown on continuation of treatment among the OPD geriatric patients. Quantitative research study has been conducted. A descriptive research design and convenience sampling technique were used to pick a total of 100 samples, (n=100). Self-structured socio demographic questionnaire and self structured interview method were used to collect the data in November 2020 at tertiary care hospitals, Bhubaneswar, Odisha, India. The collected data were analyzed through descriptive and inferential statistics. Comparison of three categories of COVID-19 pandemic factors affecting in availing OPD services reveals that the psychological factor has more effect (73%) followed by hospital related factors (68%) and the availability of public transportation and resources (62%) has less effect in availing OPD services among patients during COVID-19 pandemic. Application of chi square test reveals that there is no significant relationship of intensity of COVID-19 pandemic factors affecting in availing OPD services among patients with selected socio demographic variables. These findings suggest that facility for sanitization of hospital premises, facility for social distancing in registration counter, waiting area and other areas of hospital are not quite satisfactory. Factors like availability of public transport, availability of healthcare personnel's in OPD, adequacy of treatment facility, cost of medical services, availability of diagnostic services, are highly affecting geriatric patients in availing OPD services during COVID-19 pandemic and need to be taken care.

### 1. Introduction

WHO announced COVID-19 outbreak as a pandemic on 11<sup>th</sup> March 2020. Government of India has responded

to the pandemic by doing lockdown all over the nation for the restriction of movement to prevent the spread of infection which has also impacted many aspects of human life especially the health. In most of the hospitals the

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OPD were closed and limited to the emergency services only. COVID-19, the highly contagious and infectious disease, has resulted in more than 500 million confirmed cases and 6.2 million deaths worldwide [1]. The clinical spectrum of COVID-19 among the older adults is of great heterogeneity, ranging from asymptomatic infection to critical illness with multiple organ failure, and even death. Providing in-patient treatment has also become a challenge with the increase in anxiety among the patients, and health care providers due to the limited knowledge related to the spread and treatment of COVID-19 and increase in demand of attention of health services by increase in cases of COVID-19 [2]. Elderly people are at a higher risk of COVID-19 infection due to their decreased immunity and body reserves, as well as multiple associated comorbidities like diabetes, hypertension, chronic kidney disease and chronic obstructive pulmonary disease. Continuation of treatment of patients suffering from chronic illnesses has become a challenge due to the nationwide lockdown situation which has affected their maintenance of health, continuation of care. Elderly people were reluctant for coming to the hospital for seeking health services by the perception of getting infected from the health care facilities [3].

**Goal of the study:** The goal is to identify the impact of COVID-19 lockdown on continuation of treatment among the OPD geriatric patients and summarize the geriatric health crisis and provide suggestion regarding how to maintain their health during the pandemic.

**Novelty of the study:** This is the first study to focus on availability of OPD services among geriatric group during COVID-19. In addition the study gives an overview of the impact of selected factors during COVID-19 pandemic, over the OPD services of geriatric patient. To promote healthy aging, also provide innovative and practical approach for health care providers to assist the older people to improve their health during the pandemic.

## 2. Background of the Study

The outbreak of COVID-19 has revolutionized the dynamics of entire world. Hospitals are overburdened with increasing numbers of COVID-19 patients. Majority of hospitals have suspended their outpatient clinics and elective operative work [4].

Rahman, A. ur., Imran, M., Yasmeen, Z., & Irsad (2020) has conducted a cross sectional to see the impact of the COVID-19 pandemic on the utilization of outdoor services at Secondary Care Hospitals of Punjab, Pakistan. The data were collected from one DHQ hospital and six THQ hospitals. The OPD data of three years (the years 2018 to 2020) were extracted from District Health Information

System (DHIS). Trends of outpatients' flow during months of March and April of three years were taken. The data were analyzed using SPSS version 24. It has been seen that fear of coronavirus spread and lockdown resulted in significant reduction in number of patients at outdoor services [5].

Hamid Sharif Khan, Muhammad Mohsin, Mohsin Saif, Asim Javed (2020) has conducted a retrospective comparative cross-sectional study conducted at to see the impact of COVID-19 pandemic associated lockdown on admissions secondary to cardiac ailments in tertiary cardiac centre of Pakistan. Dramatic decline in patient admissions with cardiac ailments in the emergency department of a tertiary care hospital highlighting the overall impact of morbidity and mortality secondary to the COVID-19 pandemic due to issues not directly related to COVID-19 and also gives us an eye opener to expect a high number of complicated cardiac patients coming to our hospital and to plan accordingly [6].

Glycemic control of T1DM patients has worsened mainly due to non availability of insulin/glucostrips during lockdown period. There is a need for preparedness in future so that complications can be minimized [7].

Tele-consultation was started but was accessed by only a small number of patients. Lack of preparedness before lockdown resulted in an interruption in health care services and posed an immediate adverse effect on the outcome of dialysis patients and patients with kidney disease in India [8].

During lockdown period patients are still anxious about coming to hospital to avail OPD services due to the fear of getting infected from other patients and during treatment and diagnostic services [9,10].

## 3. Methods and Material

**Design:** A descriptive research design is used to see the impact of COVID-19 lockdown on continuation of treatment among the OPD geriatric patients.

**Sample size:** Sample size was 100 (n = 100) as calculated by Cochran formula:

$$n_0 = z^2 pq/m^2$$

$n_0$  = Required sample size

$z$  = Value corresponding to level of confidence (1.96)

$p$  = Prevalence rate (7.20)

$q$  = 1-p (1-7.20)

$m$  = Margin of error (0.05)

$$= (1.96*1.96)*7.20*(1-7.20) / 0.0025$$

$$= 3.8416*0.072*0.928 / 0.0025$$

$$= 0.2566803456 / 0.0025$$

$$= 102$$

Due to COVID-19 pandemic situation only 100 sam-

ples were participated in this study.

**Population:** The population for the study was all the geriatric patients coming to the hospital for seeking OPD services in tertiary care hospitals, Bhubaneswar, Odisha.

**Setting of the study:** The setting of the present study was conducted in OPD at Tertiary Care hospitals, City of Bhubaneswar, Odisha, India in November 2020.

**Sampling:** A total of 100 (n = 100) geriatric patients coming OPD of tertiary care hospitals were taken as sample by using convenience sampling technique.

**Inclusion Criteria:**

- Willing to participate in the study.
- Patients coming to out-patient department.
- Present during the time of data collection.
- Who can understand, read and write one of any language between odia and English.

**Exclusion Criteria:**

- The geriatric patients of IPD excluded in this study.
- Those patients are not present during time of data collection.
- Those are not willing to participate in the study.

**Tool:** A self structured questionnaire was used to assess of COVID-19 pandemic on utilization of OPD services among geriatric patients. The tool contains so many variables broadly classified under three major categories availability of transportation and resources, psychosocial factor and hospital services.

**Validity of the tool:** To obtain the content validity of tool, prepared tool with objectives and criterion checklist was submitted to eight experts in the field of nursing, hospital administrator and bio-statistician. Content validity index was analyzed and based on their suggestions and opinions the tools were modified.

**Reliability of the tool:** Homogeneity attribute of the reliability of the tool was analyzed using a Cronbach's alpha formula and the reliability was 0.89.

**Ethical Consideration:**

- Approval of research problem by Institutional research review board (IRRB) of SUM Nursing College.
- Approval for conducting study from Institutional Ethical Committee (IEC), SOA Deemed to be University.
- Written permission was obtained from medical superintendent of tertiary care hospitals.
- Written informed consent was obtained from participants.

**Description of Tool:** Self structured tool was prepared in two sections.

- **SECTION A:** Section A deals with Self Structured questionnaire socio-demographic data including

five items like Age, Gender, Education, Occupation, Marital status.

- **SECTION B:** Section B deals with Self Structure Interview method to assess the three factors affecting availability of public transport, psychology and hospital related factor among OPD geriatric patients. This section consists of eighteen items for: (I) and (II) Low (Score) -1, Moderately Low (Score) -2, Normal (Score) -3, Moderately High (Score) -4, High (Score) -5 and for (III) Very poor (Score) -1, Poor (Score) -2, Average (Score) -3, Good (Score) -4, Excellent (Score) -5.

I. Availability of transport and resources consists of five sections: High, Moderately high, Normal, Moderately low, Low.

II. Psychological factors consist of five sections: High, Moderately high, Normal, Moderately low, Low.

III. Hospital related factors consist of five sections: Very poor, Poor, Average, Good, Excellent.

**Data Collection:** Data were collected from the geriatric patients coming to OPD of tertiary care Hospitals by face to face interview method from the selected 100 (n = 100) participants.

**Statistical analysis:** Descriptive statistics were expressed as frequency and percentage distribution of samples according to socio demographic variable. Percentage distribution and rank order of the COVID-19 pandemic factors according to the intensity of their effect in availing OPD services. Comparison of intensity of COVID-19 factors affecting in availing OPD services by using percentage. Chi square analysis to find out the association of intensity of COVID-19 pandemic factors affecting the geriatric patients in availing OPD services with selected socio demographic variables.

## 4. Results

### 4.1 Section A

**Description of Socio-demographic Characteristics**

- Overall 100 geriatric patients were interviewed with a male 40% and female 60%. The distribution of surveyed population according to their socio-demographic profile Maximum half (50%) of the geriatric patients were belongs to 65-75 years of age group, and 22% were above 75-85 years of age, 28% were above 85 years of age, 3% of the patients were under no formal education, 8% were Class 1-5, the context of education, 30% of geriatric patients were below 10<sup>th</sup> standard, 31% were intermediate. And 39% of the patients were graduate and above, where 31% of the patients were pension holders, 5% were daily

wages, 14% were agriculture dependent, 29% were home maker and 21% were dependent on children. 93% of the patients were married, 5% were unmarried and 2% were widow or separated.

#### 4.2 Section B

##### Chi Square analysis between the socio-demographic characteristics with psychological factor, hospital related factor & public transportation and resources.

- The overall comparison of intensity of three groups of COVID-19 pandemic factors affecting in availing OPD services reveals that the psychological factor has more effect (73%) followed by hospital related factors (68%) and the availability of public transportation and resources (62%) has less effect in availing OPD services among geriatric patients during COVID-19 pandemic.

Figure 1 was seen that the availability of public transportation and other resources like availability of healthcare personnels in OPD, adequacy of treatment facility,

availability of diagnostic services and medicines are adequate and cost of diagnostic services and medicines have not increased. Hence these factors have now less effect in availing OPD services. Availability of public transport, availability of healthcare personnels in OPD, adequacy of treatment facility, cost of medical services, availability of diagnostic services, cost of diagnostic services, availability of medicine, cost of medicine, behaviour of hospital staffs towards patients have less effect in availing OPD services.

Application of chi square test reveals that there was no significant relationship of the availability of public transport factor with age and gender in availing OPD services during COVID-19 pandemic ( $\chi^2=2.56$  &  $\chi^2=0.0207$ ). There is no significant relationship of the psychological factors with age and gender in availing OPD services during COVID-19 pandemic ( $\chi^2=2.03$  &  $\chi^2=3.11$ ). There is no significant relationship of the hospital related factors with age and gender in availing OPD services during COVID-19 pandemic ( $\chi^2=2.06$  &  $\chi^2=0.69$ ).

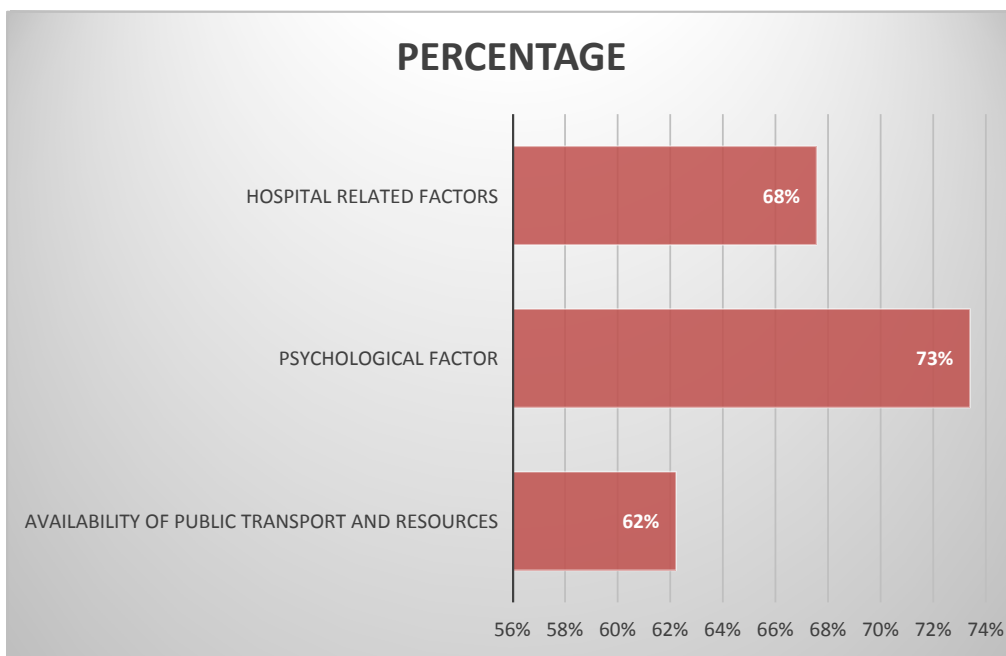
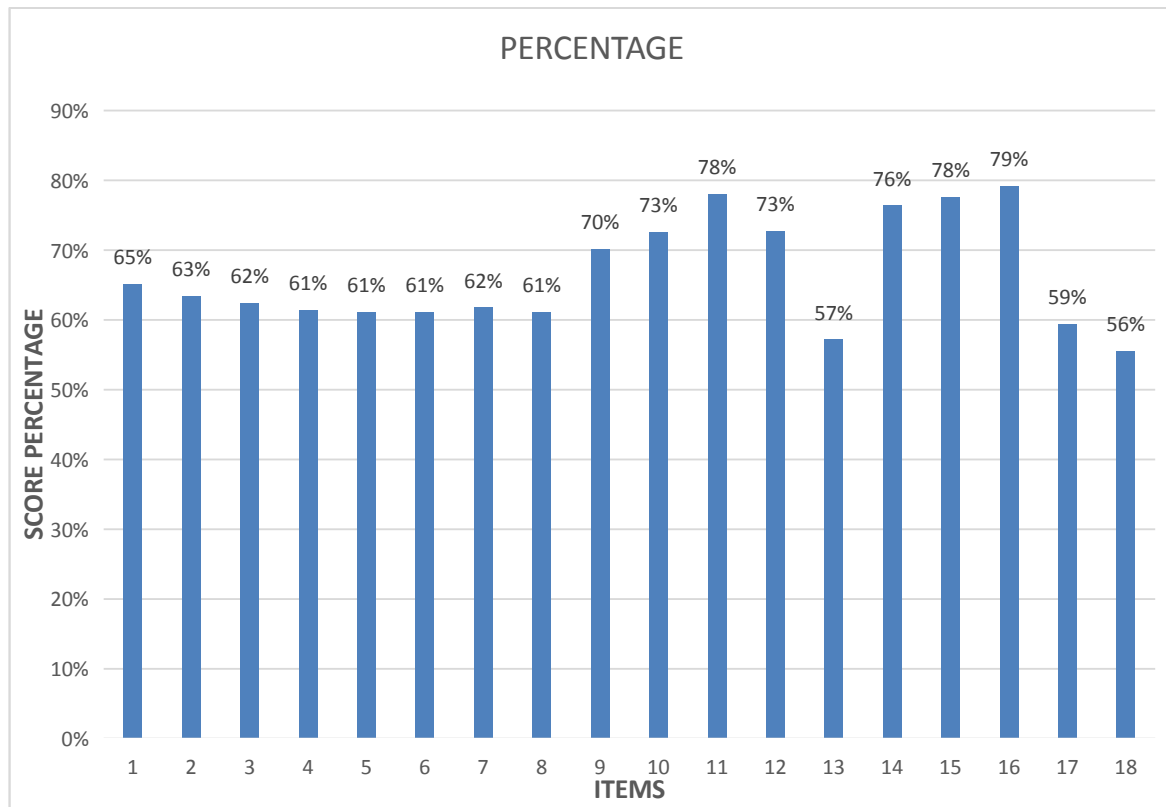


Figure 1. Bar diagram showing Percentage of score of three factors (availability of public transportation and resources, psychological factor, hospital related factor)



**Figure 2.** Bar diagram showing Percentage distribution of the COVID-19 pandemic factors according to the intensity of their effect in availing OPD services.

## 5. Discussion

### Discussion regarding socio-demographic variables

- The purpose of this study was to assess the impact of COVID-19 lockdown on continuation of treatment among the OPD geriatric patients. In the present study it was found that, 100 geriatric patients were interviewed with male 40% and female 60%. The distribution of surveyed population according to their socio-demographic profile maximum half (50%) of the geriatric patients were belongs to 65-75 years of age group, and 22% were above 75-85 years of age, 28% were above 85 years of age, 3% of the patients were under no formal education, 8% were Class 1-5, the context of education, 30% of geriatric patients were below 10<sup>th</sup> standard, 31% were intermediate. And 39% of the patients were graduate and above, where 31% of the patients were pension holders, 5% were daily wages, 14% were agriculture dependent, 29% were home maker and 21% were dependent on children. 93% of the patients were married, 5% were unmarried and 2% were widow or separated.
- A cross sectional study was conducted to see the im-

part of the COVID-19 pandemic on the utilization of outdoor services at Secondary Care Hospitals of impact of COVID-19 pandemic and lockdown on the OPD services offered at secondary care hospitals. The study revealed significant reduction in patient outcome at OPD. During this deadly pandemic and lockdown, people were reluctant to avail OPD services. According to study results, the highest percentage of patient reduction was at THQ Kot Sultan (90.3%) in the month of March as compared to that of March 2019 <sup>[11]</sup>.

- A study by Guo et al. conducted at emergency dental services in China has reported 38% reduction in overall dental emergency patients <sup>[12]</sup>.
- Another study conducted by Lee et al. in South Korea in 2015 regarding MERS epidemic revealed 33.1% reduction in ER services during MERS epidemic 2015. Similarly, a number of studies have revealed a decline in utilization of healthcare services in different hospital settings. The present is a valuable addition to the literature as it is the pioneer study to determine the impact of COVID-19 pandemic and lockdown on the OPD services at hospitals in Punjab Pakistan. It might have revealed further in-

sights on the outpatients' flow to the hospitals during COVID-19 pandemic and lockdown.

- Another study conducted by Lee et al. in South Korea in 2015 regarding MERS epidemic revealed 33.1% reduction in ER services during MERS epidemic 2015. Similarly, a number of studies have revealed decline in utilization of healthcare services in different hospital settings. The present is a valuable addition to the literature as it is the pioneer study to determine the impact of COVID-19 pandemic and lockdown on the OPD services at hospitals in Punjab Pakistan<sup>[13]</sup>.

#### **Discussion related to psychological factor, hospital related factors & availability of public transportation and resources**

- In the present study the results show that Comparison of intensity of three groups of COVID-19 pandemic factors affecting in availing OPD services reveals that the psychological factor has more effect (73%) followed by hospital related factors (68%) and the availability of public transportation and resources (62%) has less effect in availing OPD services among geriatric patients during COVID-19 pandemic.
- A theoretical review study was conducted to see the consideration of the psychological and mental health of the elderly during COVID-19. The psychological and mental health issues caused by COVID-19 among the elderly should be discussed thoroughly and comprehensively. Particularly, more effort and attention is required for those aged above 60 years and are classified in the high-risk group because they are physically and mentally more vulnerable than other age groups<sup>[14]</sup>.
- A recent study conducted on the general public, 53.8% of respondents reported being psychologically affected at a moderate or severe level, with 16.5%, 28.8%, and 8.1% reporting symptoms of severe depression, anxiety, and stress, respectively. Furthermore, 37.1% of the elderly had experienced depression and anxiety during the pandemic, and the emotional response of the elderly aged above 60 years was more apparent as compared to other age groups<sup>[15]</sup>.

#### **Limitation**

The study cannot be generalized due to following limitations:

- Data were collected from geriatric patients who were available in the OPD of hospital on the day of the survey, which means participants in home that were excluded.

- Limited data collection period due to sudden closing of emergency services.
- The study is limited to tertiary care hospitals in city setting.
- Less sample size.

## **6. Conclusions**

From the result of the study it has been concluded that facility for handwashing and hand sanitization, sanitization of hospital premises, facility for social distancing in registration counter, waiting area and other areas of hospital are very poor. Hence these factors are highly affecting geriatric patients in availing OPD services during COVID-19 pandemic and need to be taken care of geriatric patients in continuing their treatment. Geriatric patients are still anxious about coming to hospital to avail OPD services due to the fear of getting infected from other patients and during treatment and diagnostic services.

## **Conflict of Interest**

There is no conflict of interest.

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