

**A study on oral health related quality of life in consideration to prosthodontic status and treatment needs during covid-19 pandemic among elderly people in Jammu**<sup>1</sup>Dr Reecha Gupta, Professor and Head, Department of Prosthodontics, IGGDC, Jammu.<sup>2</sup>Dr. Falak Mukhtar, PG student, IGGDC, Jammu.<sup>3</sup>Dr. Renuka, PG student, IGGDC, Jammu.**Corresponding Author:** Dr. Falak Mukhtar, PG student, IGGDC, Jammu.**Citation of this Article:** Dr Reecha Gupta, Dr Falak Mukhtar, Dr Renuka, “A study on oral health related quality of life in consideration to prosthodontic status and treatment needs during covid-19 pandemic among elderly people in Jammu”, IJDSIR- February - 2022, Vol. – 5, Issue - 1, P. No. 134 – 141.**Copyright:** © 2022, Dr. Falak Mukhtar, et al. This is an open access journal and article distributed under the terms of the creative commons attribution noncommercial License. Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.**Type of Publication:** Original Research Article**Conflicts of Interest:** Nil**Abstract**

**Background:** Ageing is a universal process and a normal inevitable biologic phenomenon. The current aged population is at its highest level in the human history. Due to this demographic shift the dental profession has to prepare itself to meet the health care demands of the elderly and a reassessment of the current therapeutic paradigm is required.

Oral Health Related Quality of Life (OHRQoL) is an integral part of our general health and well-being and Prosthodontics stands at a unique position in its service to the geriatric patients. The elderly population with multiple comorbidities would face even greater barriers in assessing oral health care during this ongoing COVID-19 pandemic. The objective of this study was to assess Oral Health related Quality of Life in relation to Prosthodontic Status and Treatment requirements of the elderly population in Jammu and to evaluate the

challenges faced by elderly during COVID –19 pandemic to assess oral health care.

**Methodology:** A Cross sectional study in which two hundred and thirteen elderly people participated was conducted. The OHRQoL was measured with the OHIP-14 questionnaire. Prosthetic Status and Treatment Needs was evaluated through a closed ended self-designed questionnaire.

**Results:** The elderly people residing in Jammu city have good OHRQoL. A predominant (75.6%) oral health problem observed was edentulousness with 62.7% requiring Prosthetic rehabilitation. 84.2 % felt anxious to get the dental treatment done in the present COVID –19 pandemic due to the fear of getting infected in a dental institution or clinic. Only 37.3 % were aware of the tele dentistry and 86.1 % never had digital appointment with the dentist in the past 8 months.

**Conclusion:** It is necessary to identify Oral Health goals of the elderly and to identify those that are amenable to

treatment. Provision of Oral Health care for the elderly should not be limited to treatment alone but rather on empowering them with information and educational programmes.

**Keywords:** Ageing, Quality of life, Oral health, Oral health-related quality of life, OHIP-14, COVID-19.

## Introduction

With the world's population ageing, the current aged population is at its highest level in the human history. Ageing is the multidimensional process of physical, psychological, and social change. It's a universal process and a normal inevitable biological phenomenon<sup>1</sup>. According to the WHO report, there are more than 600 million elderly individuals worldwide<sup>2</sup> and this is estimated to double by 2025 and 2 billion by 2050<sup>3,4</sup>. People above age 60 constitute the fastest growing age group worldwide increasing from 7.9% in 1950 to 14.3% in 2000 and this age group is expected to triple in the next four decades from 739 million in 2009 to 2000 million in 2050<sup>5,6</sup>.

According to recent World Population Prospects 2019(United Nations 2019) by 2050,1 in 6 people will be over the age of 65, up from 1 in 11 in 2019.

In India, according to the last population census conducted in 2011, there are nearly 104 elderly persons (aged 60 years & above). In January 1999 'National Policy on Older persons' was adopted by Government of India which defines 'senior citizen' or 'elderly' as a person who is of age 60 years or above<sup>7</sup>. A report released by the United Nations Population fund and help age India suggests that the number of elderly populations in India is expected to grow to 173 million by 2026 which shall be amongst the highest in the world. With this demographic shift the dental profession has to prepare itself to the health care demands of the elderly and a reassessment of the current therapeutic paradigm

would be required. Successful ageing is synonymous with the maintenance of good Quality of life<sup>8</sup>. According to WHO, Quality of life is defined as an individual's perception of their position in life in the context of the culture and values systems in which they live and in relation to their goals, expectations, standards and concerns<sup>9</sup>.

Also, quality of life is described as a wellness resulting from a combination of physical, functional, emotional and social factors<sup>10</sup>.

A good quality of life in elderly population is related to different aspects of health which includes Oral Health. From dental aspect it involves controlling oral disease and restoring damaged tissue, with an underlying premise that treatment that is effective in achieving these goals will eventually produce improved oral function, comfort, and social well being<sup>11</sup>.

Oral Health Related Quality of Life (OHRQoL) is defined as an individual's assessment of how functional factors, psychological factors, social factors and experience of pain/discomfort in relation to orofacial concerns affect their well-being<sup>12</sup>.

Oral health related quality of life is an integral part of general health and wellbeing as is recognized by WHO as an important segment of the Global Oral Health Programme (WHO ,2003). A helpful tool for assessing the subjective oral situation is the concept of OHRQoL. The OHRQoL comprises components such as function, pain, psychological and social aspects which are in accordance with the WHO definition of health as the patient's overall well-being. The Oral Health Impact Profile (OHIP) is frequently used questionnaire for measuring the OHRQoL in the complete (OHIP 49) or shortened versions (OHIP 14)<sup>13-17</sup>.

As the Oral diseases are progressive and cumulative throughout life, hence the unfavorable outcomes are

more likely to be amongst the elderly with edentulousness being one of the most prevalent condition<sup>18</sup>. Knowing the Prosthodontic status and treatment needs in elderly is important for the promotion of oral health as elderly have wide range of treatment needs and require more attention from health care professionals.

The COVID 19 pandemic has affected almost every individual on this planet. The elderly population with multiple comorbidities has been included in the high-risk category. Considering their vulnerability and importance of oral health status, a questionnaire-based study was planned in Department of Prosthodontics, Crown and Bridge, Indira Gandhi Govt. Dental College & Hospital, Jammu. The objective of the study was to assess oral health status and treatment requirements of the elderly population in Jammu and to evaluate the challenges faced by elderly during COVID –19 pandemic to assess oral health care. This would provide baseline data for the policy makers to design an effective and affordable strategy and programme for better oral health of the elderly which are intergrated into general health programme.

## Material and methods

**Study deign and sampling:** Cross sectional study was conducted in Jammu city of Union Territory of Jammu and Kashmir in the Department of Prosthodontics and Crown & Bridge. The study took place from August 2020 to November 2020 in which two hundred and thirteen elderly people participated. Ethical clearance was taken from the Institutional Ethics Committee, Indira Gandhi Government Dental college, Jammu.

## Inclusion criteria

- Both male and female subjects.
- Age between 60 to 75 years.
- COVID-19 negative.

- Willing to participate in the study.

## Exclusion criteria

- COVID -19 positive
- History of any major psychiatric and neurological illness. Not willing to participate.
- All elderly subjects fulfilling these inclusion criteria were asked to participate in the study.

## Data collection and analysis

Data was collected in the form of the self-administered questionnaire, google forms and face to face interviews with trained interviewers to assist illiterate elderly participants attending the general OPD of IGGDC, Jammu. The Oral Health Related Quality of Life (OHRQoL) was measured with the OHIP-14 Questionnaire which contains 14 items relating to the frequency with which oral conditions adversely affect quality of life. Participants were asked how frequently they had experienced an impact in the preceding 12 months for each impact question and responses based on a scale of: 0 “never”; 1 “hardly ever”; 2 “occasionally”; 3 “fairly often”; and 4 “very often” were made using a five-point likert scale. The specific subject matter of each impact question included in the seven domains included: (1) Functional limitations (trouble pronouncing words and food has less taste) (2) Physical pain (sore jaw and uncomfortable to eat) (3) Psychological discomfort (worried about dental problems and self-conscious) (4) Physical disabilities (avoid eating food and interrupted during meals) (5) Psychological disabilities (concentration affected and been embarrassed) (6) Social disabilities (irritable with others and difficulty performing jobs). OHIP-14 scale has shown good reliability, validity and precision and is being used worldwide to assess oral health related quality of life.

Prosthetic status and Treatment needs was evaluated through a closed ended self-designed questionnaire which consisted of 26 questions covering the general Prosthodontic status, awareness of various treatment modalities available, treatment Expectations and the challenges faced by the elderly during the COVID-19 pandemic in assessing the required dental treatment. Data obtained from the questionnaire were merged with the data obtained from interviews. The data gathered from questionnaire was entered in MS-EXCEL computer software. SPSS 20 version software was used for data analysis.

## Results

Questionnaires were completed by 213 subjects who ranged in the age group 60 to 75 years. The elderly people residing in Jammu city had good self-perceived oral health related quality of life in general. Out of the total elderly who participated 35.9% sought dental treatment for pain and 26.3% for the replacement of the missing teeth. 75.6% of the study population had missing tooth/teeth with 60.3% having few and 12.4% having all teeth missing. 62.7% felt the need to replace the missing teeth out of which 59.3% were aware of the various treatment modalities available. For subjects who felt the need for replacement of teeth the main constraints for not seeking the dental treatment were lack of knowledge (23%), non-availability of dental personnel (10.5%), financial constraints (5.7%).

29.2% of the study population were wearing or had worn prosthesis out of which 18.2 % were satisfied, 16.3% relatively satisfied and 5.7% dissatisfied with the comfort of the prosthesis. Regarding the appearance of the prosthesis 21.5% were satisfied, 20.1 % relatively satisfied and 2.9% dissatisfied and regarding the ability to chew 19.6 % were satisfied, 17.2 % relatively satisfied and 3.8% dissatisfied. 76.1 % of the study

population perceived the need of dental treatment with improved chewing (46.9%), less pain or discomfort (23.9%) and new or better dentures (6.7%) as the major treatment expectations.

98.6% were aware of the current COVID -19 pandemic. 75.1 % perceived the need to be kept informed about the changing trends of COVID -19 pandemic. 84.2 % felt anxious to get the dental treatment done in the present COVID – 19 pandemic and 82.3% feared of getting infected in a dental institution or clinic. Only 37.3 % were aware of the tele dentistry and 86.1 % never had digital appointment with the dentist in the past 8 months. The major challenges elderly population faced in assessing the required dental treatment during the COVID -19 pandemic were personal fear /reluctance of family members to visit dental clinic or institution (36.4%), lack of information (16.3%), lack of availability of dental personnel (13.9%) and lack of transportation facility (7.7%).

## Discussion

With discoveries in the medical sciences and improving social conditions the average life span in most parts of the world continues to increase and it becomes the mission of health care professionals to not just increase the life span but also and perhaps more importantly, make later years of life more productive and enjoyable. Poor oral health among elderly people is an important public health issue that is growing burden to countries worldwide. In this study 213 elderly aged 60 to 75 years were included. The average OHIP-14 score was 3.8. The mean and median were 0. This suggests that Oral health related quality of life (OHRQoL) of the people in Jammu in general was good as most of the participants answered 'never' for most of the questions. This is positive to hear but this can be owing to the fact that the older adults seem to accept and adapt to the conditions unless some

acute episode in oral problems occurs. Elderly people deem tooth loss as an inevitable part of the ageing process. An individual's past life experiences as well as their cultural, social, and historical background will affect their self-perceived oral health status<sup>19</sup>. Oral health-related quality of life may be perceived differently by individuals having the same oral status<sup>20</sup>. Older adults who perceive poor oral health and have poor expectations may not view oral health as having an impact on their quality of life. Similarly, older adults with minor oral problems but have high expectations rate their OHRQoL as poor<sup>21</sup>. In our study 33% of the population had got their dental checkup done in the past 12 months and the predominant reason for seeking the dental treatment was pain (35.9%). These findings are in agreement with a study done among people visiting dental college hospital in India by Devaraj et al suggesting that most of the people were problem-oriented visitors rather than prevention oriented visitors<sup>22</sup>.

Other reasons for seeking dental issues were replacement of missing teeth (26.3%), routine dental checkup (15.8%) and gum problems (4.8 %). Various problems reported by the subject population in their teeth/ jaws were sensitivity (38.3 %), food lodgement (15.3%), loose teeth (11.5%) and bleeding gums (9.1 %). A predominant (75.6%) oral health problem observed was edentulousness (60.3% partially edentulous and 12.4% completely edentulous) and the major reason for tooth loss was caries (50.2%) and gum problems (8.6%) which is an observation similar to that reported in national capital territory of Delhi by Goel P et al who found edentulous less as a condition of primary concern among the elderly due to the unmet treatment needs for dental caries and periodontal diseases<sup>23</sup>.

62.7% of the subjects felt the need to replace missing teeth suggesting high demand for the Prosthetic Care in the elderly population. Lack of knowledge (23%) and non-availability of dental care (10.5%) were the major reasons for not seeking dental treatment which emphasizes on the need of oral health educational programmes and incooperation of domiciliary dental care in gerodontology.

77.5% of the study population felt that the replacement of missing teeth will change their current perspective of life by enhancing their quality of life and until now several studies have highlighted the relevance of Prosthetic restorations in edentulous or partially edentulous patients for improving Oral Health-related Quality of Life<sup>24</sup>.

In this regard Prosthodontics stands at a unique position in its service to the geriatric patients. Knowing the Prosthetic status and Treatment Needs is essential to promote the oral health of the elderly.

The COVID-19 has affected almost every individual on this planet. The elderly population with multiple comorbidities has been included in the high risk category for fatal outcomes from COVID -19 infections. Since most of the dental procedures have risk of creating aerosols which can increase the chances of getting infected so during COVID-19 pandemic, elective dental procedures were suspended. The majority of the oral health care needs of the elderly are related to chronic oral problems which could probably get worse due to the current crisis. The mass quarantine and transport restraint had inevitably restricted the activities of older adults thus further aggravating challenges that the elderly faced in the wake of COVID-19 pandemic. So, the objective of the current study was also to find out various barriers that the elderly population had to face in assessing oral health care. The various challenges that



the elderly faced in accessing oral health care during the current pandemic were personal fear /reluctance of family members to visit dental clinic/institution (36.4%), lack of information (16.3%), lack of availability of dental personnel (13.9%), lack of transportation facility (7.7%) and difficulty in communication (4.8%). 84.2% of the study population felt anxious and 82.3% feared of getting COVID-19 infection in a dental institution which suggests an increasing need to keep the elderly people informed on the various preventive oral hygiene measures to avoid COVID -19 infection through mass educational programmes. From this study it can also be inferred that most of the elderly people were not aware (62.7%) of the tele dentistry and 86.1% never have had digital appointment with their dentist in the last eight months halting the delivery of oral health care. Due to the persistent digital divide among different generations an increasing need to keep the elderly population aware about tele dentistry which can be an important ally to maintain oral hygiene routine and to evaluate urgent oral health related problems. The COVID -19 pandemic has brought into consideration an urgent need to design an effective and affordable strategies and programmes for better oral health of the elderly which can be integrated into the general health programme.

### Limitations

his study was carried out on small number of population so generalization cannot be done hence further studies with a greater sample size must be planned in future for more reliable results.

### Conclusion and summary

As the world rebuilds after the current COVID -19 pandemic it becomes necessary to identify Oral Health goals of the elderly and to identify those that are amenable to treatment. Our study clearly demonstrates high need of Prosthetic care and Treatment needs among

the elderly population of Jammu. Provision of Oral Health care for the elderly should not be limited to treatment alone but rather on empowering them with information and educational programmes. This dual strategy will aid in not just controlling oral diseases by improving dental literacy (preventive care) but also change attitudes towards greater utilization dental services (curative care)<sup>23</sup>. The government, non-government agencies and private institutions can play a major role to improve the overall quality of life and wellbeing of the the old people. Only 37.3 % were aware of the tele dentistry and 86.1 % never had digital appointment with the dentist in the past eight months. This highlights the need for increased attention and resources to go toward improving digital literacy in the elderly to close the digital divide for good in the long-term.

### Clinical significance

This study can provide us a baseline data regarding the Oral Health status of the elderly in Jammu and to evaluate the challenges faced by them to access oral health care during the COVID -19 pandemic. This can facilitate us to cater to the health care demands of the elderly as well as keep us well acquainted with appropriate tools and strategies that are to be used in a comprehensive way to handle any future global health emergency. There is a need for holistic approach with a multidisciplinary team work to ramp up our efforts in improving our oral health infrastructure in advance to avert the catastrophic consequences.

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