Review Article

Oral Health Related Quality of Life in Geriatric Patients - A Review

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ABSTRACT

The health is defined by WHO as; not only absence of disease but a multidimensional construct which also includes subjective parameters of well-being. Oral health has a strong biological, psychological and social consequence as it affects aesthetics, communication and quality of life. Oral health related quality of life (OHRQOL) is a relatively new, but rapidly growing phenomenon. OHRQOL is associated with: Functional factors, psychological factors, social factors, and experience of pain or discomfort. Complete tooth loss or being completely edentulous signifies death in dental well-being constituting a common and irreversible health problem in the elderly. Oral health-related quality of life (OHRQoL) is one of the key aspects of the health of the geriatric health.

Key words: *Health, Quality of Life, Oral Health Related Quality of Life*

Aging in humans portray the dynamic nature of it, being a species and could be defined as a multi-dimensional change in growth and development over a period of time [1]. In India, any person of age 60 years and above is referred to as an elderly or senior citizen [2]. Of this population, 80% reside in rural areas, 40% below the poverty line [3]. The World Health Organization suggests, however, that health is defined not only by the absence of disease but also by subjective well-being [health-related quality of life]. Quality of Life is a multi-dimensional and subjective construct which is anchored in an individual's internal frame of reference [4].

Oral health has a strong biological, psychological and social consequence, as it affects aesthetics, communication and quality of life. In spite of the decline in the prevalence of oral diseases and the consequent reduction of tooth loss, the elderly population is still characterised by high indices of edentulousness and reduced numbers of teeth particularly in less well-developed countries.

Complete tooth loss or being completely edentulous signifies death in dental well-being [5], constituting a common and irreversible health problem in the elderly. The perceptions of the population in terms of their position in life in the context of culture and value systems in which they live and in relation to their goals, expectations, standards and concerns, is now recognized as a valid parameter in patient assessment in all areas of physical and mental healthcare, including oral health [5].Oral health-related quality of life [OHRQoL] is one of the key aspect of the same.

OHRQOL is a relatively new, but rapidly growing phenomenon, which has emerged over the past 2 decades. Slade and others identified the shift in the perception of health from merely the absence of disease and infirmity to complete physical, mental, and social well-being, the definition of the WHO [6]. It is evident from the literature that the notion of OHRQOL appeared only in the early 1980s in contrast to the general HRQOL notion that started

to emerge in the late 1960s. One explanation for the delay in the development of OHRQOL could be the poor perception of the impact of oral diseases on QOL. Only 40 years ago, researchers rejected the idea that oral diseases could be related to general health. Davis asserted that apart from pain and life-threatening cancers, oral disease does not have any impact on social life and it is only linked with cosmetic issues [7].

BASIC CONCEPT

The concept of "OHRQOL" was aimed at the new perspective i.e., the ultimate goal of dental care mainly is good oral health. According to the US Surgeon General, oral disease and conditions can "Undermine self-image and self-esteem, discourage normal social interaction, and cause other health problems and lead to chronic stress and depression as well as incur great financial cost. They may also interfere with vital functions such as breathing, food selection eating, swallowing and speaking, and with activities of daily living such as work, school, and family interactions" [8]. People assess their HRQOL by comparing their expectations and experiences [9].

DEFINITION

OHRQOL as "a multidimensional construct that reflects [among other things] people's comfort when eating, sleeping, and engaging in social interaction; their self-esteem; and their satisfaction with respect to their oral health." [10]. OHRQOL is associated with [10]: Functional factors, Psychological factors, Social factors, and Experience of pain or discomfort [Figure 1].

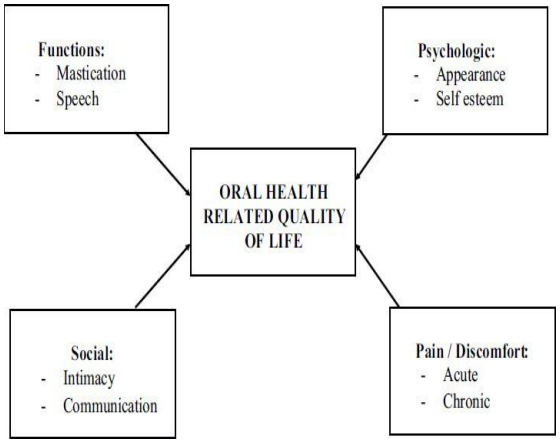

Figure 1: Factors associated with oral health related quality of life

USES OF QUALITY-OF-LIFE MEASURES IN CLINICAL PRACTICE

- Identifying and prioritizing problems
- Facilitating communication
- Screening for hidden problems
- Facilitating shared clinical decision making
- Monitoring changes/responses to treatment [11].

INDICES USED TO MEASURE OHRQOL

The need to develop patient centred measures of oral health status was first recognized by Cohen and Jago [12]. Fundamentally, there are three categories of OHRQOL measure as indicated by Slade [13]. These are social indicators, global self-ratings of OHRQOL and multiple items questionnaires of OHRQOL. Social indicators are used to assess the effect of oral conditions at the community level. Typically, large population surveys are carried out to express the burden of oral diseases on the whole population by means of social indicators.

Global self-ratings of OHRQOL, also known as single-item ratings, refer to asking individuals a general question about their oral health. Response options to this global question can be in a categorical or Visual Analog Scale [VAS] format. For example, a global question asking: "How do you rate your oral health today?" can have categorical responses ranging from "Excellent" to "Poor" or VAS responses up to 100 scales.

Multiple items questionnaires are the most widely used method to assess OHRQOL. Researchers have developed QOL instruments specific to oral health and the number continues to grow rapidly to comply with the demand of more specific measures. In addition, these measures can be classified into generic instruments that measure oral health overall versus specific instruments. This can be specialized to measure specific oral health dimensions such as to assess specific population groups involving denture impact on nutritional status of aged population [14]. Furthermore, OHRQOL instruments vary widely in terms of the number of questions [items], and format of questions and responses.

Ten OHRQOL instruments that have been thoroughly tested to assess their psychometric properties such as reliability, validity, and responsiveness were presented at

the First International Conference on measuring oral health [15]. Different measures of OHRQOL with their author's name and year [16] is shown in Table 1 whereas Table 2 shows different Oral health related quality of life questionnaires.

IMPORTANCE OF QOL MEASUREMENT

Most studies that evaluate changes in the oral health status of individual subjects and populations have been based on the clinical indicators of disease; there are relatively few evaluation studies on health and welfare from the subject's perception [17]. These indicators were constructed and tested in epidemiological studies on different populations to build a more concrete relationship between subjective and objective oral health measures, which would help to estimate the real population needs [18]. In general, health related QOL can be determined by two approaches: The first includes an interpretative and qualitative explanatory method and the second, which is the most common approach, is usually based on the questionnaires that emphasize the subject's perception on physical and psychological health and functional capacity [19].

Table 1: Name of different measures

No	Authors	Names of Measures
1	Cushing et al 1986	Social Impacts of dental disease
2	Atchinson and Dolan 1990	Geriatric Oral Health Assessment Index
3	Strauss & Hunt 1993	Dental Impact Profile
4	Slade & Spencer 1994	Oral Health Impact Profile
5	Locker & Miller 1994	Subjective Oral Health Status Indicators
6	Leao & Sheiham 1994	Dental Impact on Daily Living
7	Adulyanon & Sheiham 1997	Oral Impacts on Daily Performances
8	McGrath & Bedi 2000	OH-Quality of Life UK

Table 2 Oral Health Related Quality of Life Questionnaires

No	Instrument	Dimension Measured	Number of Questions	Response Format
1	Social Dental Scale	Chewing, Talking, Smiling, Laughing, Pain & Appearance	14	Yes / No
2	RAND Dental Health Index	Pain, Worry, Conversation	3	4 Categories, "Not at all" to "Great Deal"
3	General Oral Health Assessment Index	Chewing, Eating, Social Contacts, appearance, pain, worry, self-consciousness	12	6 Categories, "Always – Never"
4	Dental Impact Profile	Appearance, Eating, Speech, Confidence, Happiness, Social Life, Relationships	25	3 Categories, Good Effect, Bad Effect & No Effect
5	Oral Health Impact Profile	Function, Pain, Physical Disability, Social Disability, Handicap	49	5 Categories, Very Often - Never
6	Subjective Oral Health Status Indicators	Chewing, Speaking, Symptoms, Eating, Communication & Social Relations	42	Various, Depending On Question format
7	Oral Health Quality of Life Inventory	Oral Health, Nutrition, Self-Related Oral Health, Overall Quality of Life	56	Part A - 4 Categories Not at all to A Great Deal Part B - 4 Categories "Unhappy-Happy"
8	Dental Impact On Daily Leaving	Comfort, Appearance, Pain, Daily activities, Eating	36	Various Depending On Question Format
9	Oral Health Related Quality of Life	Daily Activities, Social Activities, Appearance	3	6 Categories, All of time to None of time
10	Oral Impacts on Daily Performance	Performance in Eating, Speaking, Oral Hygiene, Sleeping, Appearance, Emotion	9	Various Depending on Question Format

The results obtained by using these instruments are usually reported as a score system, which indicates the severity of the outcome measures or oral diseases [20]. Information on QOL allows the evaluation of feelings and perceptions in the individual level, increasing the possibility of effective communication between professionals and patients, better understanding of the impact of oral health on the lives of the subject and family, and measuring the clinical results of services provided. In public health, QOL measurement is a useful tool to plan welfare policies because it is possible to determine the population needs, priority of care, and evaluation of adopted treatment strategies; thus helping in the decision making process [21].

RESEARCH ON OHRQOL

Current status and future directions Research on QOL has gained interest and visibility in recent decades internationally. "How" we live and not just "how long" we live has increasingly become recognized as a central issue in healthcare and health research. QOL assessment received heightened visibility with the release of the healthy people 2010 health promotion and disease prevention initiative.Major research recommendations along with the expected outcomes in this subject are,

- Oral health needs to be defined and conceptualized and appropriate operational measures need to be brought into systematic use
- More research needs to be conducted to conceptualized and measure oral health as a system contributing to total health
- Mediating and independent variable influencing oral health outcomes need to be thoughtfully considered
- An assessment of "Outcomes for whom" needs to be made to determine the nature and extent of indicators
- Methodological issues such as following need to be addressed, development of outcome measure for longitudinal studies; appropriateness of measures as influenced by the passage of time, sensitivity, specificity, reliability, and validity.
- Testing the sensitivity of generic health status indicators for persons with oral conditions and disorders
- Exploring whether generic instruments such as sickness illness profile could be modified for use in patients with oral conditions
- Investigating relationships between clinical indicators of disease and subjective indicators measuring disease impact
- Assessing the value of subjective indicators in clinical trials of existing/new intervention/technologies
- Testing measures and indicators in populations of all ages [11].

OHRQOL ROLE IN DENTAL EDUCATION

OHRQOL considerations can serve as a tool for bringing about the changes in the perspective of future clinician. Dental education aims at training future clinician, researchers, and administrators as well as future dental educators. OHRQOL is a crucial concept in professional lives of all these groups. It provides researchers with a chance to consider the larger perspective of how their research will ultimately serve point.

The OHRQOL can provide the basis for any oral healthcare program and it has to be considered one of the important elements of the Global oral health program [22]. Research on trends in dentistry and dental education shows that in future, fewer dentists will take care of the increasing number of patients. Therefore, educating these patients about promoting good oral health and preventive care will be crucial. Research also shows that certain population segments are drastically underserved. Dental education has to make a contribution if this situation is to change.

CONCLUSION

With rapidly changing knowledge base and technology in all healthcare fields, interdisciplinary considerations and collaborations become increasingly important. QOL measures are not only being used in population surveys, but also in randomized clinical trials, technology assessment in healthcare and evaluation of healthcare delivery systems. The perception of QOL has a subjective component and therefore varies from one culture to another. Therefore, research at the conceptual level is needed in countries where the OHRQOL has not been described, like India. This is a necessary step because adapting models developed and validated in other cultures could lead to inaccurate measurement of OHRQOL and may not address the important issues pertaining to Indian culture.

REFERENCES

1. Gavrilov LA, Gavrilova NS. Evolutionary theories of aging and longevity. The Scientific World Journal. 2002;2:339–56.
2. Census of India 2011 Website: Office of the Registrar General & Census Commissioner, India. Available from: http://censusindia.gov.in/
3. Dhankar K, Ingle NA, Chaudhary A et al. Geriatric dentistry: A review. J Oral Health Comm Dent. 2013;7[3]:170-73.
4. Sischo L, Broder HL. Oral health-related quality of life: what, why, how, and future implications. J Dent Res. 2011; 90[11]:1264–70.
5. Nadgere JB, Doshi AG, Kishore S. An evaluation of prosthetic status and prosthetic need amongst people living in and around Panvel, Navi-Mumbai-A Survey. Int J Prosthet Dent. 2010;18[1]:6–9.
6. Gift HC, Atchison KA, Dayton CM. Conceptualizing oral health and oral health-related quality of life. Soc Sci Med. 1997;44(5):601–8.
7. Davis P. Compliance structures and the delivery of health care: The case of dentistry. Soc Sci Med. 1976;10(6):329–37.
8. Rozier RG, Pahel BT. Patient- and population-reported outcomes in public health dentistry: Oral health-related quality of life. Dent Clin North Am. 2008;52(2):345–65.
9. Carr AJ, Gibson B, Robinson PG. Measuring quality of life: Is quality of life determined by expectations or experience? BMJ. 2001;322(7296):1240–3.
10. Rockville, Maryland: US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institute of Health; 2000. DHHS Oral health in America: A report of the Surgeon General; p. 7.
11. Inglehart MR, Bagramian RA, (2002). Oral health-related quality of life: an introduction. In: Oral health-related quality of life. Chicago: Quintessence Publishing Co., Inc., pp. 1-6
12. Cohen LK, Jago JD. Toward the formulation of socio dental indicators. Int J Health Serv. 1976;6(4):681–98.
13. Slade GD. (2002). Assessment of oral health-related quality of life. In: Oral health-related quality of life. Inglehart MR, Bagramian RA, editors. Carol Stream, IL: Quintessence Publishing Co., Inc., pp. 29-46
14. Wöstmann B, Michel K, Brinkert B et al. Influence of denture improvement on the nutritional status and quality of life of geriatric patients. J Dent. 2008;36(10):816–21.
15. Slade GD, Strauss RP, Atchison KA et al. Conference summary: Assessing oral health outcomes: Measuring health status and quality of life. Community Dent Health. 1998;15(1):3–7.
16. Allen PF. Assessment of oral health related quality of life. Health Qual Life Outcomes. 2003;1:40.
17. Locker D, Jokovic A. Three-year changes in self - perceived oral health status in an older Canadian population. J Dent Res. 1997;76(6):1292-7
18. Locker D, Miller Y. Evaluation of subjective oral health status indicators. J Public Health Dent. 1994;54(3):167-76
19. McGrath C, Broder H, Wilson-Genderson M. Assessing the impact of oral health on the life quality of children: Implications for research and practice. Community Dent Oral Epidemiol. 2004;32(2):81-5.
20. Slade GD, Spencer AJ. Development and evaluation of the Oral Health Impact Profile. Community Dent Health. 1994;11(1):3-11.
21. Seidl EM, Zannon CM.Quality of life and health: Conceptual and methodological issues. Cad Saude Publica. 2004;20(2):580-8
22. Petersen PE. The World Oral Health Report 2003: Continuous improvement of the oral health in 21st century: The approach of the WHO Global Oral Health Programme. Geneva: World Health Organization; 2003. Community Dent Oral Epidemiol. 2003 Dec; 31 Suppl 1:3-23.

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