Short communication

Oral health-related quality of life: a broader perspective

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أثر نوعية الحياة من حيث ارتباطها بصحة الفم: المنظور الأوْسَع

منيرة الشمراني

الخلاصة: من الأهمية بمكان فهم مدى إدراك الناس لأثر صحة الفم على نوعية حياتهم. فنوعية الحياة من حيث ارتباطها بصحة الفم تمثّل مفهوماً جديداً، ولكنه آخذ في الشيوع بسرعة. وتكمن أهمية هذا المفهوم بشكل خاص في ثلاثة مجالات، هي: الممارسة السريرية لطب الأسنان، وبحوث طب الأسنان، والتثقيف في مجال طب الأسنان. وهنالك ثلاثة أساليب لقياس أثر صحة الفم على نوعية الحياة، أكثرها شيوعاً الاستبيانات المتعددة البنود. والمهم أن تصبح نوعية الحياة من حيث ارتباطها بصحة الفم هي الأساس لأي برنامج للارتقاء بصحة الفم. كما يستلزم الأمر إجراء بحوث على المستوى المفاهيمي (النظري) في البلدان التي لم يسبق تقييم أثر صحة الفم على نوعية الحياة فيها، ومنها بلدان إقليم شرق المتوسط.

ABSTRACT It is important to understand how people perceive the impact of oral diseases on their quality of life. Oral health-related quality of life (OHRQOL) is a relatively new but rapidly growing notion. The concept of OHRQOL is particularly significant to 3 areas – clinical practice of dentistry, dental research and dental education. There are different approaches to measure OHRQOL; the most popular one uses multiple item questionnaires. OHRQOL should be the basis for any oral health programme development. Moreover, research at the conceptual level is needed in countries where OHRQOL has not been previously assessed, including the Eastern Mediterranean countries.

Qualité de vie relative à la santé bucco-dentaire : une perspective plus large

RÉSUMÉ Il est important de comprendre la manière dont les gens perçoivent l'impact des affections bucco-dentaires sur leur qualité de vie. La qualité de vie relative à la santé bucco-dentaire (OHRQoL) est une notion relativement nouvelle mais qui prend une importance grandissante. Le concept de la qualité de vie relative à la santé bucco-dentaire est particulièrement important pour trois domaines – la pratique clinique en dentisterie, la recherche dentaire et l'éducation dentaire. Il y a différentes approches pour mesurer cette qualité de vie, la plus populaire recourant à des questionnaires à items multiples. La qualité de vie relative à la santé bucco-dentaire devrait être à la base de l'élaboration de tout programme de santé bucco-dentaire. De plus, la recherche au niveau conceptuel est nécessaire dans les pays où cette qualité de vie n'a pas fait l'objet d'une évaluation antérieure, notamment les pays de la Méditerranée orientale.

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Introduction

The impact of oral diseases on the quality of life is very obvious. The psychological and social impact of such diseases on our daily life is easily comprehensible which makes them of considerable importance. Any disease that could interfere with the activities of daily life may have an adverse effect on the general quality of life. Therefore, the notion of oral health-related quality of life (OHRQOL) is the product of many observations and research about the impact of oral diseases on different aspects of life.

Background of oral health-related quality of life

OHRQOL is a relatively new but rapidly growing phenomenon which has emerged over the past 2 decades [*1*]. Several authors have explored the evolution of OHRQOL and documented the circumstances that have led to its prominence [*1–3*]. Slade [*2*] and others [*3,4*] 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 World Health Organization (WHO), as the key issue in the conception of HRQOL and, subsequently OHRQOL. This shift happened in the second half of the 20th century and it was the result of a "silent revolution" in the values of highly industrialized societies from materialistic values that concentrate on economic stability and security to values focused on self-determination and self-actualization [*5,6*]. For example, maintaining physically healthy teeth and gums would be the only dental care concerns of a patient with materialistic values, whereas a patient with post-materialistic values may have broader considerations which include aesthetic concerns and the impact of appearance on self-esteem and interaction with others [*4*].

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 quality of life. Only 40 years ago, researchers rejected the idea that oral diseases could be related to general health [*7–9*]. 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*]. Likewise, others have argued that dental disease was one of the frequent complaints such as headache, rash and burns, that were perceived as unimportant problems [*8*] that rarely contributed to the classic "sick role" and therefore should not be an excuse for exemption from work [*9*]. Later, in the late 1970s, the OHRQOL concept started to evolve as more evidence grew of the impact of oral disease on social roles [*10–13*].

Clearly, clinical indicators of oral diseases such as dental caries or periodontal diseases were not entirely suitable to capture the new concept of health declared by WHO, particularly the aspects of mental and social well-being. This has created a demand for new health status measures, in contrast to clinical measures of disease status. As a result, researchers started to develop alternative measures that would evaluate the physical, psychological and social impact of oral conditions on an individual. These alternative measures are in the form of standardized questionnaires.

Definition of oral health-related quality of life

Not surprisingly, the term "oral health-related quality of life" has no strict definition. However, there is a general agreement that it is a multidimensional concept [*1*]. The definitions available vary from simple to more rigorous. An example of a simple definition is the one provided by the United States Surgeon General's report on oral health which defines 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" [*14*]. On the other hand, more rigorous definitions are mostly the product of research designed to conceptualize oral health and OHRQOL and refine the OHRQOL construct. These types of definitions are more operational since it is possible to link the definition to one or more specific, concrete indicator [*15*]. Furthermore, these definitions are important as a first fundamental step towards developing OHRQOL measures.

In developing OHRQOL, existing conceptual models of health and HRQOL have generally been used to construct new models specific to OHRQOL. In 1995, Gift and Atchison [*16*] developed a multidimensional concept of OHRQOL based on the structure of the HRQOL model proposed by Patrick and Erickson [*17*]. According to that model, OHRQOL incorporates survival (absence of oral cancer, presence of teeth); absence of impairment, disease or symptoms; appropriate physical functioning associated with chewing and swallowing and absence of discomfort and pain; emotional functioning associated with smiling; social functioning associated with normal roles; perceptions of excellent oral health; satisfaction with oral health; and absence of social or cultural disadvantage due to oral status [*16*]. Similarly, Locker developed a model for oral health earlier in 1988 in which he described consequences of disease [*18*]. For example, disease can lead to impairment which may lead to functional limitation and/or disability and finally handicap as the last consequence. Disability is more likely to occur when both discomfort and functional limitation exist, and handicap is more probable if all 3 have happened [*18*].

Generally, all existing OHRQOL models have a lot in common. As indicated by Gift et al., concepts of oral health and oral health-related behaviour reported in the literature were consistent from the middle of the 1960s to the early 1990s [*19*]. For instance, different surveys in 1964, 1970s, 1980s and 1990s all showed that the absence of perceived need was the major cause of not going to the dentist.

Importance of oral health-related quality of life

The concept of OHRQOL is significant to 3 areas of dental health in particular; these are the clinical practice of dentistry, dental research and dental education [*3*].

OHRQOL has an obvious role in clinical dentistry which translates into the clinicians' recognition that they do not treat teeth and gums, but human beings. Besides, oral-related behaviour such as practising good oral hygiene, having regular check-ups, and spending more money on aesthetic dental care are motivated by OHRQOL concerns.

The notion of OHRQOL is tremendously important at all levels of dental research. Successful research, whether basic scientific research, clinical studies or community

research, makes a contribution to patients' quality of life. At the community research level, the concept of OHRQOL is especially vital to promote oral health care and access to care. For example, a clinical indicator such as decayed, missing and filled teeth (DMFT) is not a suitable tool for advocacy at the political level because it was designed mainly to quantify the magnitude of the disease (dental caries) but not the impact of that magnitude on an individual's daily life and general health. It is thus better appreciated by dentists than politicians. In contrast, politicians may appreciate the impact of dental caries when high DMFT scores are interpreted in terms of impaired quality of life because of inability to eat, sleep or concentrate because of the associated pain, for instance. In this sense, OHRQOL is a better tool to communicate with policy-makers and negotiate access to care.

Likewise, the same approach is more useful to educate individuals about their oral health. People are more likely to behave positively when they understand how oral diseases affect their general health and quality of life rather than simply the affect of such disease on their teeth or gums.

Measurement of oral health-related quality of life

Researchers now recognise the importance of OHRQOL and have started to and continue to generate measurement instruments.

Fundamentally, there are 3 categories of OHRQOL measure, as indicated by Slade [*2*]. These are social indicators, global self-ratings of OHRQOL and multiple items questionnaires of OHRQOL. Briefly, 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 such as days of restricted activities, work loss and school absence due to oral conditions. While social indicators are meaningful to policy-makers, they have limitations in assessing OHRQOL. For example, using work loss to measure the impact of oral diseases is not an appropriate indicator for those who are not working.

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 analogue 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 on a 100 mm scale.

Multiple items questionnaires are the most widely used method to assess OHRQOL. Researchers have developed quality of life 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. The latter can be specialized to measure specific oral health dimensions such as dental anxiety [*20*], or conditions such as head and neck cancer [*21*] or dentofacial deformity [*22*], or to assess specific populations such as children [*23*].

Also, 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

Table 1 Oral health-related quality of life questionnaires[a]

Measure	Dimensions measured	No. of questions	Example of question	Response format
Sociodental scale	Chewing, talking, smiling, laughing, pain, appearance	14	Are there any types of foods you have difficulties chewing?	Yes/no
RAND dental health index	Pain, worry, conversation	3	How much pain have your gums and teeth caused you?	4 categories: "not at all" to "a great deal"
General oral health assessment index	Chewing, eating, social contacts, appearance, pain, worry, self-consciousness	12	How often did you limit the kinds or amounts of food you eat because of problems with your teeth or dentures?	6 categories: "always" to "never"
Dental impact profile	Appearance, eating, speech, confidence, happiness, social life, relationships	25	Do you think your teeth or dentures have a good effect (positive), a bad effect (negative), or no effect on feeling comfortable?	3 categories: good effect, bad effect, no effect
Oral health impact profile	Function, pain, physical disability, psychological disability, social disability, handicap	49	Have you had difficulties chewing foods because of problems with your teeth or dentures?	5 categories: "very often" to "never"
Subjective oral health status indicators	Chewing, speaking, symptoms, eating, communication, social relations	42	During the last year, how often have [dental problems] caused you to have difficulty sleeping?	Various, depending on question format
Oral health quality of life inventory	Oral health, nutrition, self-related oral health, overall quality of life	56	Two-part questions: (A) How important is it for you to speak clearly? (B) How happy are you with your ability to speak clearly?	Part A: 4 categories ("not at all important" to "very important"). Part B: 4 categories ("unhappy" to "happy")
Dental impact on daily living	Comfort, appearance, pain, daily activities, eating	36	How satisfied have you been, on the whole, with your teeth in the last 3 months?	Various, depending on question format

Table 1 Oral health-related quality of life questionnaires[a] (concluded)

Measure	Dimensions measured	No. of questions	Example of question	Response format
Oral health-related quality of life	Daily activities, social activities, conversation	3	Have problems with your teeth or gums affected your daily activities such as work or hobbies?	6 categories: "all of the time" to "none of the time"
Oral impacts on daily performances	Performance in eating, speaking, oral hygiene, sleeping, appearance, emotion	9	Four-part questions: (A) In the past 6 months, have [dental problems] caused you any difficulty in eating and enjoying food? (B) Have you had this difficulty on a regular/periodic basis or for a period/spell? (C) During the last 6 months, how often have you had this difficulty? (D) Using a scale from 0 to 5, which number reflects what impact the difficulty in eating and enjoying food had on your daily life?	Various, depending on question format

[a] Adapted from reference [2].

Oral Health [*24*]. Table 1 displays the 10 instruments, dimensions measured, number of questions, an example of a question and response format of each measure [*2*].

Where do we go from here?

The OHRQOL is a broader appreciation of the impact of oral health. It should provide the basis for any oral health programme development. In the World Oral Health Report (2003), WHO listed the impact of oral health on the quality of life as an important element of the Global Oral Health Programme [*25*]. Moreover, oral health care providers are urged to integrate the OHRQOL concept into their daily practice to improve the outcome of their services.

However, the small number of published papers in this field from Middle East countries, as compared to those published in the United States, United Kingdom, Australia or Canada, indicates that this area of health has not received enough attention in this region. Given the fact that the perception of quality of life has a subjective component and therefore could vary from one culture to another [*3*], research at the conceptual level is needed in countries where the OHRQOL has not been previously described, such as Middle East countries. This is a necessary step because adapting conceptual models developed and validated in other cultures could lead to inaccurate measurement of OHRQOL and may not address the important issues in that particular culture.

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WHO Oral Health Programme

Oral health is part of total health and essential to quality of life and WHO projects intend to translate the evidence into action programmes. The Oral Health Programme therefore gives priority to integration of oral health with general health programmes at community or national levels. The WHO Oral Health Programme works from the life-course perspective; currently community programmes for improved oral health of the elderly and of children are given high priority. The implementation of school oral health programmes within the framework of the WHO Health Promoting Schools Initiative is supported and guidelines are developed.

Source: The objectives of the WHO Global Oral Health Programme
http://www.who.int/oral_health/objectives/en/index.html