



## Assessment of Quality of Life in Dentistry

**Tolibova Munira Izzatulloevna**

*Bukhara State Medical Institute named after Abu Ali ibn Sino, Bukhara, Uzbekistan*

*Bukhara Institute of Innovative Medicine, Bukhara, Uzbekistan*

**Abstrak.** Quality of life is an integral characteristic of a person's physical, psychological, emotional and social functioning based on the subjective perception of their condition. In dentistry, it reflects the impact of oral health not only on chewing and speech but also on appearance, communication and psychological well-being. The aim of this study was to analyse and systematise the concepts and instruments used to assess oral health-related quality of life (OHRQoL). An analytical review of foreign and domestic literature was carried out using comparative analysis, generalisation and systematisation. The analysis showed that general quality-of-life questionnaires are insensitive to the effects of specific oral conditions, so special instruments are used in dentistry. Of the approximately ten indices developed since D. Locker's conceptual framework, the most widely used are the Oral Health Impact Profile (OHIP and its short form OHIP-14) and the Dental Impacts on Daily Living (DIDL); for children, the Child Perceptions Questionnaire (CPQ11–14) has been developed. These instruments make it possible to assess treatment needs and the effectiveness of dental care from the patient's perspective. In Uzbekistan, such studies have been conducted mainly in adults, which justifies research on the oral health-related quality of life of children and adolescents.

**Keywords:** quality of life, oral health-related quality of life, OHRQoL, OHIP-14, DIDL, CPQ, dental health, children, questionnaire.

### 1. Introduction

Quality of life is an integral characteristic of a patient's physical, psychological, emotional and social functioning, based on the subjective perception of their condition in the context of objectively existing medical problems. Quality-of-life research is a reliable and effective method of assessing a person's overall well-being from their own point of view [1]. Two components of quality of life are conventionally distinguished: an objective component, which characterises the individual's state of health, and a subjective component, determined by the individual's perception of that state.

The peculiarity of quality of life is that it cannot be determined solely from the data of medical examination or clinical and instrumental methods, since it takes into account the subjective opinion of the individual. This is especially important in dentistry: oral diseases are among the most prevalent conditions worldwide, and untreated caries of permanent teeth alone affects about 2.4 billion people [2]. Oral health is recognised as an integral part of general health and quality of life [3], since the condition of the teeth and oral cavity affects not only eating and speech but also appearance, communication and self-esteem. Determining quality of life is therefore important both in health promotion programmes and in treatment, where its dynamics make it possible to evaluate the effectiveness of therapeutic and preventive measures [4].

The aim of this study was to analyse and systematise the concepts and instruments used to assess oral health-related quality of life and to determine the directions for their application in paediatric dentistry.



## 2. Materials and Methods

The study was conducted as an analytical review of foreign and domestic publications devoted to the concept of quality of life, the conceptual framework for measuring oral health, and the development and validation of questionnaires for assessing oral health-related quality of life in adults and children. The methods of comparative analysis, generalisation and systematisation of scientific data were used.

## 3. Results

### 3.1 The concept of quality of life

The World Health Organization identifies six main domains of quality of life: the physical domain (energy, fatigue, pain, discomfort, sleep and rest); the psychological domain (positive and negative emotions, thinking, learning, concentration, self-esteem, body image); the level of independence (mobility, daily activities, ability to work, dependence on medication, treatment or the care of others); social relationships (personal relationships, social support, sexual activity); the environment (safety, financial resources, accessibility and quality of health and social care, access to information, opportunities for learning and leisure, the physical environment); and spirituality and personal beliefs [5].

### 3.2 Principles of quality-of-life measurement

Special instruments, namely questionnaires, are used to assess quality of life. They can be administered in face-to-face interviews, by telephone or by self-completion. Each question usually has several clearly graded answers, each corresponding to a certain number of points; the total score numerically characterises quality of life, and its change, for example during a health promotion programme or treatment, reflects a change in quality of life. Depending on their purpose, questionnaires are divided into general ones, designed to assess a person's condition as a whole regardless of disease, and specific ones, designed for a particular disease. General questionnaires may be insensitive to changes caused by a specific pathology, whereas specific questionnaires reflect the problems of a particular disease but cannot be used in healthy people [6].

### 3.3 Dental health and its components

According to the WHO definition, dental health implies the preservation throughout life of a functional, aesthetically natural dentition of at least 20 teeth without the need for prosthetics [7]. Oral health-related quality of life therefore covers not only the physical and functional but also the social, communicative and psychological components of dental health. People of different ages, sex, religion and social status may regard different aspects of dental health as most important, so that with a similar clinical diagnosis different volumes of dental intervention may be required for the care provided to meet patients' expectations. From the patient's perspective, the requirements for dental care can be ranked as follows: elimination of pain or discomfort, restoration or improvement of function, and creation of a new aesthetic of the mouth.

### 3.4 Instruments for assessing oral health-related quality of life

The conceptual framework for measuring oral health was originally described by D. Locker on the basis of the classification of impairment, disability and handicap [8]. Since then, approximately ten indices have been developed to assess the impact of oral health on quality of life. The most widely used is the Oral Health Impact Profile (OHIP), a 49-item questionnaire covering seven dimensions [9], and its short form OHIP-14, which has good reliability and validity [10]. The Dental Impacts on Daily Living (DIDL) measure assesses impacts on appearance, pain, comfort, eating restrictions and general performance [11]. Other widely used instruments include the Geriatric Oral Health Assessment Index (GOHAI), developed for older people [12], and the Oral Impacts on Daily Performances (OIDP) index, which measures the impact of oral conditions on the ability to perform daily activities [13]. For children, the Child Perceptions Questionnaire (CPQ11–14) has been developed and validated [14]; a version for 8–10-year-olds (CPQ8–10) [15] and the Child-OIDP index [16] have also been proposed for younger children. The main characteristics of these instruments are presented in Table 1.



**Table 1.** Main instruments for assessing oral health-related quality of life

| Instrument        | What it measures                                                                                                                                                                     | Application                                                          |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| OHIP-49 / OHIP-14 | Frequency of impacts of oral conditions in seven dimensions: functional limitation, physical pain, psychological discomfort, physical, psychological and social disability, handicap | Adults; epidemiological surveys and evaluation of treatment outcomes |
| DIDL              | Impacts on daily living in five dimensions: appearance, pain, comfort, eating restrictions and general performance                                                                   | Adults; linking subjective impacts with clinical status              |
| CPQ11–14          | Oral symptoms, functional limitations, emotional and social well-being                                                                                                               | Children aged 11–14 years                                            |

*Source: compiled by the author.*

These instruments measure the frequency, severity and extent of the impact of dental problems on a person's functional and socio-psychological well-being and make it possible to assess the need for dental care and its effectiveness.

#### 4. Discussion

The analysis shows that the assessment of oral health-related quality of life complements traditional clinical indices with the patient's own perception of the consequences of dental disease. This is important for several reasons. First, clinical indicators do not always reflect how strongly a condition affects a person's life, and patients with similar clinical findings may need different volumes of care. Second, some of the indices can be used in epidemiological studies and in planning the volume of dental care provided by health systems. Third, changes in OHRQoL scores make it possible to evaluate treatment and prevention from the patient's point of view.

Numerous studies of the impact of oral health on the quality of life of the working-age population have been conducted worldwide, and research in paediatric dentistry, including the impact of caries on the quality of life of children and of oral health on adolescents, has used child-specific instruments. In Uzbekistan, however, such studies have been conducted mainly in adults. The use of validated instruments requires cultural and linguistic adaptation according to established guidelines [17], including forward and back translation, expert committee review and pre-testing [18], and this remains a limitation for their direct application in the national context.

#### 5. Conclusion

Quality of life in dentistry is a multidimensional characteristic that reflects the physical, functional, psychological and social consequences of oral diseases and cannot be determined from clinical data alone. Special instruments, primarily OHIP-14, DIDL and, for children, CPQ11–14, make it possible to assess the impact of oral health on daily life, the need for dental care and the effectiveness of treatment and prevention. Since in Uzbekistan such studies have been conducted mainly in adults, the adaptation of these instruments and the study of oral health-related quality of life in children and adolescents are a priority for further research.

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