

Health and Oral health-related Quality of Life- A Review

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Abstract: This paper addresses the issue of quality of life in the context of health and culture by outlining concepts, health care models, health related quality of life models. This perspective is inherently multidisciplinary and multiparadigmatic. Contemporary concepts of health indicate that oral health should be defined in general physical, psychological and social well-being terms in relation to oral status. The mouth, the principal organ of our ability to express, can be read scientifically as an organ to cure, or symbolically as a part of the body capable of recording and expressing our psycho-emotional experience.

Oral health related Quality of life (OHRQoL) is a multidimensional construct, referring to the extent to which oral conditions disrupt the normal functioning of a person. It has become an important focus for assessing the impact on quality of life and well-being of a range of oral conditions along with the outcomes of clinical care such as the effectiveness of treatment interventions. The validity of OHRQoL as a measure of outcome in clinical trials depends in part on understanding the causal processes that link oral conditions to patient-reported outcomes. Developing knowledge of key pathways will help to facilitate the design of intervention strategies by guiding clinicians on where to intervene most effectively, with whom, and how.

In terms of clinical implications, future health intervention strategies and research programs should focus on the "holistic" interaction between domains (genetics, biology, psychology, sociality, ecology, culture, and spirituality), rather than addressing them as separate aspects of the individual or environment. By integrating oral health into strategies for promoting general health and by assessing oral needs, health planners can greatly enhance both general and oral health.

Key Word: Health, Health related quality of life, Oral health related quality of life, Quality of life

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I. Introduction

The term "health" derives from the old English word 'hoelth' which means "wholeness or being sound or well."¹ Health is more of a changing term than a static one. A clear interpretation of the concept of health in a cultural context involves consideration of several factors: anatomical and physiological beliefs, health components; health cognitions and disease classification; and health interventions.

Notions about body shape, size, and adornments vary across cultures and serve as sources of social communication and social functioning (e.g., group membership and social rank). Beliefs about the body's internal structure often vary across cultures, affecting expectations and presentations of bodily problems and reactions to interventions. Finally, assumptions about the body's inner workings show differences between cultures and have significant effects on human behaviour. Helman² defines at least three separate lay models of the body's inner workings: the balance Model, the Plumbing Model, and the Machine Model.

Kleinman³ made a distinction between illness and disease. Illness is a subjective experience and reflects a personal response to discomfort. In comparison, disease refers to observable and measurable deviation in body structure and function. Health may be equated with curative medicine or considered a "field term," i.e., the outcome of human biology, lifestyle, climate, and the health care system⁴. The view of curative medicine considers "health as a matter of hospitals, physicians, and patients"⁵. On the other hand, health's "field definition" creates a structure for health promotion in which health-related inequities are minimized, the preventive emphasis is increased, and person coping is improved⁶. In the context of health promotion, the emphasis is placed on self-care, mutual support, and safe environments.

Lay definitions of health

Health lay concepts differ across many factors, including age, gender, social class and culture⁷⁻⁹. Also, quantitative and qualitative studies have defined health meanings for the laypeople. This research has suggested, among other things, the following lay definitions: (1) Health includes physical fitness and peak condition; (2) Health represents psychological fitness and happiness; (3) Health indicates a balance between natural forces within the body; (4) Health is related to or lacks in spiritual activity; (5) Health is an absence of illness; (6)

Health is a reserve which offers disease resistance. These definitions may vary among people, and a given individual may often hold multiple definitions at the same time.

Professional definitions of health

Health as Disease or Illness

Health is defined as being without illness or disease. The Western medical paradigm is described by Naidoo and Wills⁹ as biomedical, reductive, mechanistic and allopathic. This interpretation also runs counter to lay-definitions of health found in other cultures¹⁰.

Health as an Ideal State

For many years, the World Health Organization¹¹ has defined health as "a state of complete physical, emotional, and social well-being, not just the absence of disease or infirmity." This concept holds health to be an ideal state, which some writers have argued is unachievable^{7,12}.

Health as a Social/Psychological Construct

Many sociologists and psychologists have come forward with alternative health concepts^{7,13,14}. Health was seen as an optimal capacity for individuals to take on the obligations for which they were socialized, as a product, as a state of self-actualization, as a story, and as a metaphor^{7,9}. It has been argued that each of these meanings is restricted as a valid and practical concept of health, due to its specificity^{12,13}. Such concepts of health, however, emphasize that besides biological factors, health is influenced by politics, economy, culture, and environment⁸. The proponents of these health models recognize the importance of social/psychological factors for maintaining good health.

Health as Quality of Life

Developing from the World Health Organization¹¹ the idea of health as including physical, psychological and social elements, and as a synthesis of many of the social/mental definitions of health, the health and quality of life equation has evolved over the last quarter-century^{9,15,17}. There are both global and health-related quality of life metrics, which indirectly describe what quality of life is meant to represent health¹⁵⁻¹⁸. Global indicators, including life satisfaction, well-being, and positive and negative affect measures, represent the quality of life of the general population, and as such are normative and represent a gold standard of quality of life^{16,17}. Quality of life measures can also be divided into subjective ones and objective ones¹⁷. Some authors have found that there is little consensus on how to measure the quality of life, as demonstrated by the vast array of available measures and the lack of the rationale behind the measures¹⁸⁻²⁰.

An Integrated Definition of Health

Seedhouse¹² argued that none of the above professional health concepts is sufficient to define health promotion's ultimate goal. He also claims that principles motivate all health promotion activities and, thus, bias all health promotion activities. The health promoter is thus obligated to attempt to understand the political basis for his or her biases and others' prejudices. He suggested the Foundations Theory of Health. The critical components are summarized in the following quote: the (optimum) state of health of a person is equal to the state of the set of conditions that satisfy or allow a person to work to fulfill his or her realistic chosen and biological potential⁽¹²⁾.

He states that some disorders are common to all persons while others are individual-specific. The four broad concepts common to all individuals are (1) basic needs; (2) information management; (3) decision-making based on information; and (4) proactive community participation. Seedhouse¹² describes a fifth condition that is individual-specific and determined by the abilities and circumstances of the individual.

Health care

The philosophy and practice of holistic health are found in ancient literary texts from Babylon and Greece, i.e. the belief that there are delicate interrelationships between mind and body. Hippocrates suggested a relationship between body fluids or humor, and the temperaments of personality. Physicians adopted the holistic approach to health by playing multiple roles: philosophers—teachers, priests, and healers. Nevertheless, the 17th century marked the end of holistic health. The conventional view of the psyche's reciprocal relationship with the soma was considered unscientific. Mechanical laws or physiological principles have assumed appropriate approaches to medical science and practice.

In the mid-19th century, the rigid dualistic approach to health softened, and holistic health re-emerged in the 20th century. The renewed interest in holistic health was primarily due to the limitations inherent in the biomedical approach. When describing health behaviours, the dominant biomedical research model was incomplete. Such shortcomings contributed to the development of Sigmund Freud's theories in psychoanalytic

and psychodynamics²². Health psychology notably fostered the mental health and developmental disabilities aspects of health in the aftermath of the Second World War. However, issues related to quality of life, health care costs and alternative approaches to mainstream health care were of concern from both the biomedical and biopsychosocial viewpoints on health.

Health care Models

Three conceptual health care models have dominated: the biomedical model, the prevention model, and the health promotion model.

The biomedical model reflects the method to treat disease or fix unintended imperfections or birth defects²³. It has underscored the role of psychological, lifestyle and personality factors in precipitation, exacerbation, outcome, and disease prevention²⁴. For three centuries, starting in the 17th century, the biomedical view of health gained popularity. The second view reflects the path to healthy living being explored to achieve longevity and quality of life. Since the mid-1970s, this societal view of health has regained favour, with a focus on prevention rather than cure²³.

Two decades ago the biopsychosocial approach to health care was formally introduced²⁵. This model assumes that human vulnerability to disease and patterns of subjective experiences of illness and recovery are interactively influenced by psychosocial causes, the immune system, stress and social support, and the nature of the relationship between helpers and helpee²⁶. Psychosocial factors include personality, lifestyle and coping skills. There are three major reasons for opposing this strategy^{26,27}. Firstly, it's more important to health science than to clinical practice. Second, it overestimates the impact of social and psychological factors in disease. Thirdly, it stigmatizes sick people for the chronicity of their illness or their supposed adherence to health-jeopardizing lifestyles.

The preventive or public health paradigm gained impetus from several sources. The first concerns acknowledging the link between lifestyle and health. The second is the increased awareness that unsafe actions could be causing disease. The third concerns the progress in minimizing the occurrence and spread of communicable diseases by consistently introducing public health interventions, i.e. improving food, accommodation, air, and water quality, public sanitation, and personal hygiene. Landrine and Klonoff²⁸ identified five major etiological agents of illness that are common across a variety of cultures: (1) violations of interpersonal norms; (2) violations of social roles; (3) emotions associated with social norms and role violations; (4) moral and religious transgressions; and (5) quasi-natural agents (e.g., hot-cold foods or weather) and blood "states" (e.g., weak, thin, bad).

A significant extension of the prevention approach, the health promotion model's emphasis, is on those factors and behaviours which enhance the health and quality of life of a person. As such, the emphasis is on positive responses (for example, exercise, a healthy diet, and good interpersonal relationships). On the other hand, the focus of many prevention programs is on controlling negative behaviors (e.g., avoidance of smoking, diet restriction, reduction of alcohol use). While there has been an emphasis on physical factors in health promotion initiatives to date, there is a growing belief that psychological and social factors are equally important.

Quality of life (QoL)

'Quality of Life' in varying situations means different things for different people. For the first time in 1964, American President Lyndon Johnson used the term 'Quality of Life' to explain that there is more to life than just being financially secure²⁹. Champbell described it in terms of satisfaction³⁰, Goodinson and Singleton characterize it in terms of life plans fulfillment³¹, while Hornquist mentioned it in terms of requirement fulfillment³², there is no universal definition for QoL, but most authors accept that it is a multi-faceted and complex construction³³.

The definitions were divided into 'expert' or professional definitions and lay definitions by a taxonomy of quality of life definitions²⁰. Definitions of experts can be divided up into three groups. 1) In terms of satisfaction, global concepts define QoL and do not shed light on its components or how it can be operationalized. 2) Component Definitions divide quality of life into sections or dimensions which make them more applicable to empirical work. Primarily define QoL in terms of the subjective and objective dimensions. 3) The focused concept defines one or a small number of quality of life components. For instance, the concept of 'health-related quality of life' defines the quality of life concerning one factor which is health.

The World Health Organization³⁴ described the quality of life as "the perception of the individual's position in life in the context of the culture and value systems in which they live, and in relation to their goals, aspirations, standards, and concerns." This expression defines QoL as a multidimensional concept, combining physical health, psychological state, social relations, personal beliefs, and their environment, and highlights the perception that quality of life is subjective.

The concept of QoL consists of domains related both to health and non-health related facets such as political, cultural, or societal. However, as people cannot be isolated from their environment, both HRQoL and non-HRQoL overlap. This narrower concept of quality of life related to health is known as 'health-related quality of life' (HRQoL).

Health-Related Quality of Life (HRQoL)

The concept helps to assess the effect of health problems on people's everyday lives, considering the viewpoint of the person. In terms of clinical outcomes, Kaplan and colleagues³⁵ described HRQoL as the impact of disease and treatment on disability and day to day functioning. HRQoL can also be defined as a personal and complex term because as health status decline, perspectives on life, roles, relationships and experiences shifts³⁶. Bowling³³ defined it as optimum levels of mental, physical, position (e.g. job, parent, profession, etc.) and social functioning, including relationships and perceptions of health, fitness, life satisfaction, and well-being. It should also include some assessment of the patient's level of comfort with treatment, outcome, and health status and with future prospects. It is distinct from the quality of life as a whole, which would also include housing adequacy, employment, and immediate environmental perceptions.

HRQoL Models

According to Aaronson³⁷, There are two common threads in the structure and content of measures that bear the QOL mark. First, these interventions tend to reflect a conceptual approach with a multidimensional nature. Frequently four broad dimensions of health are integrated: 1. Physical health, namely, somatic sensations, signs of the disease, side effects of treatment. 2. Mental health, from a positive sense of well-being to nonpathological aspects of psychological distress and diagnosable psychiatric disorder. 3. Social health, including quantitative and qualitative evaluation of social contacts and interactions. 4. Functional health, including both physical functioning in terms of self-care, mobility, and physical activity level and functioning of social roles concerning family and work. Beyond these key dimensions, many measures integrate variables that are specific to a given disease, treatment, or study. The second common feature of most QOL measures is their predominant dependence on the patient's subjective judgment rather than on scores from physicians, nurses, family members, or other third parties³⁷.

Dijkers^{38,39} suggested a comprehensive model of QOL aspects and its assessment. The key distinction is made between three major groups: QOL as subjective well-being (SWB), QOL as achievement and QOL as a utility. The Dijkers model is an example of a systematic QOL model covering and combining different approaches to QOL measurement. The main drawback of the model could be the lack of integration of personal and environmental factors, as defined in the International Classification of Functioning, Disability, and Health (ICF)⁴⁰. Also, psychological and emotional sequelae, such as coping and adjustment, depression, acceptance of disability, and control could fit in different boxes at the same time. These concepts are part of HRQOL (the mental component), but they reflect subjective QOL at least to some degree³⁹.

Wilson and Cleary presented a popular QOL model⁴¹. This conceptual model connects physiological variables, the status of symptoms, functional health, expectations of general health, and overall QOL. In this model, functional health was defined as an individual's ability to perform and adapt to the environment, measured both objectively and subjectively over a given period. General health perceptions represent an integration of all of the previous concepts of health plus others, such as mental health. Overall, QOL is described as the discrepancy between a person's expectations or hopes and his or her present experiences. In this model, general health (HRQOL) is a determinant of overall QOL or SWB.

A model that is heavily based on the WHO definition of health is the PROMIS conceptual model⁴². The mission of PROMIS is to use measurement science to create a state-of-the-art assessment system for self-reported health. While PROMIS does not use the word "quality of life" to describe the system, it is clear that a broad operationalization of health as physical, mental, and social health was expected. PROMIS treats SWB as a subset of HRQOL, rather than the opposite or the ultimate outcome.

According to these writers, the ICF⁴⁰ acknowledges the likelihood of people can be disabled and healthy and emphasizes the importance of the environment in the process of disabling. Therefore, the function-neutral health-related quality of life indicator comprises no functional status items and instead, the physical health scale includes items such as energy and pain⁴³.

Oral Health-Related Quality of life (OHQoL)

Oral health was defined as the 'standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort or embarrassment and which contributes to general well-being'. This definition reflects the WHO definition of health and bio-psychosocial concepts of health.

Cohen and Jago⁴⁶ promoted the development of socio-dental indicators to enhance the lack of data about the psychosocial impact of oral health issues on individuals. Reisine and Bailit⁴⁷ found that clinical standards had little relevance to an individual in determining their oral health status and proposed that a poor link existed between a person's subjective oral health evaluation and clinical indices. This indicated that other factors affect subjective judgments. These results marked the transition from conventional dentistry focusing on the disease to contemporary dentistry, which acknowledges the effect of psychosocial influences on oral health and therefore the need to assess subjective experiences of oral conditions.

Contemporary dentistry aims to obtain and maintain a functional, pain-free, aesthetically and socially acceptable dentition for the lifespan of most people⁴⁸. It is crucial to account for the disruptions in physical, psychological, and social functioning caused by oral conditions. Thus, OHQoL bridges the relationship between traditional clinical variables and person-centred self-reported measures.

Definitions of OHQoL

OHQoL has multiple definitions ranging from incredibly simple to complex. Early attempts at describing OHQoL were unclear and were generally restricted to the oral cavity.

Locker⁴⁹ defined it as ‘the functioning of the oral cavity and the person as a whole and with subjectively perceived symptoms such as pain and discomfort’. Later he described it as ‘when talking about oral health, our focus is not on the oral cavity itself but on the individual and how oral disorders, diseases, and conditions threaten health, well-being, and quality of life’⁵⁰. This latter definition emphasizes the effect of oral problems on general health and well-being, thus representing an evolution in the understanding of OHQoL.

Gift and Atchison⁵¹ defined it as a “self-report specifically pertaining to oral health—capturing both the functional, social and psychological impacts of oral disease”. Kressin⁵² described it as the impact of oral conditions on daily functioning. A more comprehensive but straightforward definition described OHQoL as ‘the extent to which oral disorders affect the functioning and psychosocial well-being’⁵³. The United States Surgeon General’s report⁵⁴ on oral health, defined OHQoL 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 concerning their oral health". This is a straightforward and general explanation of what OHQoL means.

Locker and Allen⁵⁵ draw a fine line between subjective oral health and OHQoL. Subjective health status describes the person’s current health state, whereas OHQoL is a subjective evaluation of that status. OHQoL is “the impact of oral disease and disorders on aspects of everyday life that a patient or person values, that are of sufficient magnitude, in terms of frequency, severity or duration to affect their experience and perception of their life overall”.

OHQoL’s assessment encourages a shift from conventional evaluation of dental criteria and cares that focuses on the social and emotional experience and physical functioning of an individual in determining appropriate goals and outcomes for treatment.

Applications of HRQoL and OHQoL

Table: Potential uses of Oral Health Related Quality of Life measures⁵⁶.

Field of Work	Potential uses in health field/oral health related quality of life
Political	<ul style="list-style-type: none"> • Planning public health policy • Planning in resource allocation
Clinical Uses	<ul style="list-style-type: none"> • Communication tools • Commissioning program of care • Evaluating intervention • Assessing the outcomes of new treatment • Aid understanding of the patient point of view • Screening purposes • Identifying and prioritizing patient problems and preferences • Monitoring and evaluating individual patient care • Determining which patients might benefit most from treatment • Involving patients’ perspectives in decision making & self-care • To predict outcomes to provide appropriate care • Clinical Audit
Research	<ul style="list-style-type: none"> • Evaluating outcomes of health care interventions • Elucidating the relationships between different aspects of health

Public Health	<ul style="list-style-type: none"> • Describing and monitoring illness in population • Planning, monitoring and evaluating services • Needs assessment and prioritization • Encouraging greater lay participation in health care
Theoretical	<ul style="list-style-type: none"> • Exploring models of health • Describing factors influential to health

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