A science metric study of Iranian published articles about oral health-related quality of life

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Review Article

Abstract

BACKGROUND AND AIM: A new perspective on health suggested that the ultimate goal of dental care, namely good oral hygiene, should no longer merely is seen as the absence of caries or periodontal disease; a patient's mental and social well-being should be considered as well. The concept of oral health-related quality of life (OHRQoL) captures the aim of this new perspective. The present article aimed to describe the published studies carried out to date in Iran on OHRQoL.

METHODS: After adequate searching, 28 articles were reviewed published up to beginning 2013.

RESULTS: Among the reviewed articles, there were 9 studies in which the OHRQoL questionnaires have been validated in Farsi, 15 studies in which the OHRQoL has been evaluated in a specific group of patients and 4 were interventional studies.

CONCLUSION: Further precise studies are necessary in this regard in Iran especially in the field of intervention.

KEYWORDS: Oral Health, Quality of Life, Iran

At present, disturbances in the normal somatic, psychological and socioeconomic functioning of individuals and a self-report or patient-based (subjective) assessment of health status are considered essential to the measurement of oral health.[1] Oral diseases such as dental caries and periodontal disease are very common and they do not only have physical consequences on the affected patients but also affect their quality of life.[2] Traditional tools used to quantify oral health are objective and actually disease-based; their use is indicated only for determination of prevalence and level of the common diseases [e.g. decayed, missing, and filled teeth (DMFT) or community periodontal index of treatment needs (CPITN)] but these tools are unable to evaluate the ability of patients to chew food and enjoy the taste of food items;

therefore, these clinical indicators of oral diseases are not entirely suitable to capture the new concept of oral health, particularly the aspects of mental and social well-being[3,4] and this has resulted in a new direction and attitude toward evaluation of oral health by new alternative measures.[5-7]

The quality of life (QoL) is defined as a subjective judgment of an individual of his/her health status and in fact satisfaction or dissatisfaction with specific aspects of life, which are important for every individual.[8] QoL is impaired in a large number of patients and various aspects of their life, such as mastication of food and speech, which can be affected.[9] Oral health-related quality of life (OHRQoL) is defined as an individual assessment of how the functional, psychological and social factors affect the well-being, discomfort and pain that the

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patient experiences in relation to orofacial concerns.[7,8] The need to develop an individual measure when assessing oral health outcomes on an individual level was first suggested by Locker (1988).[8] Growing recognition of the importance of OHRQoL has since led to the development of a number of tools in this field.[3] The most widely used tools to assess OHRQoL are multiple-item questionnaires.[3,4] Multiple-item questionnaires explore specific dimensions of OHRQoL in greater detail and generally offer greater statistical precision for identifying group differences in OHRQoL. Researchers have developed numerous quality-of-life tools specific to oral health to comply with the demand of oral specific measures.[4,6] Each questionnaire also has its own advantages and therefore indications, is divided into several theoretical domains, consists of multiple items (a range of 3-49), yields an overall score and attempts to quantify relative frequency of the consequences of oral problems.[4-6] For example, GOHAI is much easier to use compared to OHIP for assessing outcomes of clinical procedures.[4] The Oral Health Impact Profile (OHIP) was developed by Slade and Spencer (1994) and is a technically sophisticated OHRQoL tool that is widely used internationally.[8] The OHIP might be the most popular instrument for measuring OHRQoL; however, there are several other tools in this field.[6] Because of differences between children and adults, one specific questionnaire has been designed for the assessment of OHRQoL in children, namely child-OIDP (Oral Impacts on Daily Performances). Another questionnaire which was developed by Atchinson and Nolan (1990) in older adults is called GOHAI (Geriatric Oral Health Assessment Index).[4] OHRQoL questionnaires vary widely in terms of the number of items and format of questions and responses. More than 10 OHRQoL tools that have been thoroughly tested to assess their psychometric properties have been emerged.[5] Nowadays, these standard questionnaires are available and employed to evaluate functional, social

and psychological consequences of oral and dental disorders in patients' lives. The question of which measure to use has been the subject of intense research in recent years.[10]

Considering the large number of articles published internationally on the subject and the importance of OHRQoL in attitudes toward the effect of oral health on humans all over the world, the present study aimed to describe the published research studies carried out to date in Iran on OHRQoL.

Methods

In the present study, first the full texts of all the randomized clinical trial (RCT) articles published in Iranian scientific-research journals up to beginning of 2013 were collected. To this end, international databases (Pubmed), the website of the Ministry of Health and Medical Education at (www.hbi.ir) and also the website (www.sid.ir) were evaluated for a list of journals with scientific-research status, approved by the Journals' Committee of Medical Sciences of Iran. The list was used to extract the list of dental journals. Then the website of each journal and the website of Iranmedex were checked for full texts of all the RCT articles published in the time interval specified in the present study. The strategy of the search was based on the keywords. In this case, the keyword of "Oral Health-related Quality of Life" were searched in combination with the words "Iran" or "Persian". The full texts were collected and evaluation was then initiated.

Results

The full texts of 28 articles, published up to the beginning of 2013, were retrieved. In the next stage, the full texts of the articles were read through. It appears it is possible to classify published Iranian articles into 3 categories (Table 1):

1. Articles in which the psychometric properties of various OHRQoL questionnaires translated into Farsi have been evaluated, which include validity, reproducibility and response rate (9 articles).

2. Articles in which the OHRQoL has aim (15 articles).

3. Articles in which changes in OHRQoL levels have been evaluated after an intervention (4 articles).

In the 9 articles of the first category, Iranian researchers have evaluated the psychometric properties of Persian translations of 6 OHRQoL questionnaires, including the following:

OIDP (Oral Impacts on Daily Performances)

PedsQL (pediatrics quality of life inventory)

OHIP (Oral Health Impact Profile)

ECOHIS (Early Childhood Oral Health Impact Scale)

CPQ (Child Perception Questionnaire)

GOHAI (Geriatric Oral Health Assessment Index)

Evaluation of the 15 articles mentioned above shows that for the two OHIP and GOHAI tools, two groups of researchers (Navabi et al. and Ravaghi et al. for OHIP and Motallenejad et al. and Navabi et al. for GOHAI) have made attempts to determine psychometric properties and the results have been published.[11-14] In addition, Jabarifar et al. have published the results of Persian standardization of ECOHI in two articles; in one article they have presented the Persian translation of the questionnaire and in the other they have determined the sensitivity

been evaluated in a specific group of patients and specificity of the questionnaire.[15,16] In the 3 remaining articles of this category, standardization of OIDP, PedsQL and CPQ questionnaires have been carried out by Dorri et al., Pakpour et al. and Khdem et al., respectively.[17-19]

On the other hand, evaluation of the 15 articles in the second category showed that evaluation of OHRQoL has been carried out in two special subgroups; in one subgroup the quality of life has been determined in a specific group of individuals or patients (9 articles) and in another subgroup the relationship between quality of life and another clinical factor has been evaluated (6 articles).[20-34]

In 4 articles of the 8 articles of the first subgroup, the OHRQoL level has been determined in young or adult patients referring to dental faculty clinics. The tool used to determine OHRQoL level in 3 studies of 4 studies was OIDP; in the study carried out by Younesian et al. the special version of this tool for children (Child-OIDP) was used.[20-22] However, in a study by Khodadadi et al., GOHAI tool was used.[23] In the remaining half of this subgroup, OHRQoL levels have been determined in a special group of patients; Salem and Eshghi evaluated patients with hemorrhagic disorders.[24] Two OHIP and CPQ tools were used in these studies.

Table 1. Categorization of 28 published studies on oral health-related quality of life in Iran

Type	Number	Details of the studies of articles
Validation studies	9	Navabi et al.[11], Ravaghi et al.[12] Motallebnejad et al.[13], Navabi et al.[14] Jabarifar et al.[15], Saleki et al.[16] Dorri et al.[17], Pakpour et al.[18] Khadem et al.[19]
Assessment studies In specified groups	15	Kakoei et al.[20], Mohebbi et al.[21] Younessian et al.[22], Khodadadi et al.[23] Salem and Eshghi[24], Torabi et al.[25] Kakoei et al.[26], Khadem et al.[27] Jabarifar et al.[28], Khadem et al.[29] Torkan et al.[30], Asgari et al.[31] Heravi et al.[32], Ravaghi et al.[33] Khadem et al.[34]
Interventional studies	4	Jabarifar et al.[35] Kadkhoda et al.[36] Navabi et al.[37] Sahba et al.[38]

As it was discussed above, in the third category, 4 studies have evaluated the effects of therapeutic intervention on OHRQoL levels. Dental procedures under general anesthesia, comparison of two therapeutic choices in orthodontics, rendering or not rendering orthodontic treatment and the effects of the use of artificial saliva in patients receiving radiotherapy were the interventions whose effects on OHRQoL were considered and evaluated in studies carried out by Jabarifar, Kadkhoda, Navabi and Sahba.[35-38]

Discussion

QoL research in medicine and dentistry has attracted considerable attention over the past two decades.[2] OHRQoL is a relatively new but rapidly growing phenomenon, which has emerged recently and is significant to areas of dental health in particular: the clinical practice of dentistry, dental research and dental education.[5] In the World Oral Health Report (2003), WOH listed the effects of oral health on the QoL, as important elements of the Global Oral Health Program.[10] However, the small number of published papers in this field from Iran as compared to those published in the western countries indicates that this area of health has not received sufficient attention in this country.

Discussion of the validity of QoL instruments is highly needed. Worldwide, several studies have indicated a problem regarding the use of original OHRQoL tools that have not been tested for validity or reliability.[3] Given the fact that the perception of QoL has a subjective component and therefore could vary from one culture to another, research at the conceptual level is needed in countries where the OHRQoL has not been previously described, including Iran. 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.[5]

As discussed above, six tools have been standardized to date in Iran for evaluation of OHRQoL, among which OHIP, GOHAI, OIDP and CPQ are more important and have wider applications. The large number of studies carried out all over the world with the use of OHIP and GOHAI tools shows their importance and it might be the reason why two groups of researchers in Iran have tried to translate them into Persian simultaneously.[11-14] Such simultaneous efforts have not been reported from other parts of the world with any other languages. It is possible to prevent such double effort by researchers by bringing about more cooperation between them. In addition, comparison of the results of studies carried out by Navabi et al., Ravaghi e al. and Motllebnejad et al. showed that in the study carried out by Navabi et al. in order to standardize two key questionnaires of OHIP and GOHAI, the responsiveness index has been determined for the Persian version in addition to determination of reliability and reproducibility. The responsiveness in one of the psychometric indices increases the validity of the translated version.[11-14]

Evaluation of Iranian clinical studies on OHRQoL shows that the Persian versions of the above-mentioned tools have been used effectively and with great care, demonstrating the importance and use of basic studies. On the other hand, it appears the number of studies in the first category, or the basic studies, is sufficient in Iran and will meet the requirements of researcher intending to carry out studies in this respect. As discussed above, the bulk of the attention of Iranian researchers in relation to OHRQoL has been focused on determining its level in patients with special diseases. A more accurate review of this field shows that the orthodontic field and patients in this field have been more extensively evaluated.[30-32] However, there is an extensive area for research in some unexplored fields including patients with common mucocutaneous diseases, chronic maxillofacial pain and also

patients with common and important systemic conditions such as diabetes mellitus and chronic renal conditions.

The effect of oral health status on the general quality of life is considered a difficult field and evidence in relation to this field is insufficient even at an international level.[3]

A study by Torabi e al. in Iran focused on patients with head and neck cancers, which is one of the limited numbers of studies in Iran in this field; in this study, SF 36 (short-form health survey) tool was used to determine the effect of the condition on the general quality of life of patients.[25] However, in a study by Kokoei et al., no mention is made of the standard tool used despite mentioning the term "quality of life".[26] In studies in which the general quality of life and OHRQoL are evaluated simultaneously, two separate tools should be used to determine each variable, which has been effectively implemented in a study by Torabi et al.[25]

The minimum number of OHRQoL studies relates to interventional studies despite the fact that this field is the most important branch of study in the developed countries at present. In fact, the extent of OHRQoL has developed beyond standardization of tools and determination of their level in patients with varying characteristics or their comparison with common clinical parameters, and what international researchers now focus on is evaluation of the effect of various dental treatments on improving OHRQoL level of patients.[3] Therefore, it is highly recommended that dental researchers in Iran focus on the effect of surgical and non-surgical periodontal treatments, various methods of replacing lost teeth, especially with dental implants, treatment of temporomandibular joint disorders, removal of impacted teeth and orthognathic surgeries on OHRQoL.

Selection of questionnaires consistent with the aims of various studies has always been an important consideration in designing processes of OHRQoL studies. For example, regarding studies on young parents, selection of CPQ tool for 8 to 10-year-old patients is more suitable but Child-OIDP tool is suitable for 11-15-year age group.[24] In some studies carried out in Iran in some cases sufficient attention has not been paid to the selection of more appropriate tools. On the other hand, in some cases selection of the most appropriate tool is still a matter of controversy among researchers even at an international level. In this context, it is still very difficult to select one of the two tools of OHIP and GOHAI as a more suitable tool in certain evaluations.[14] Evaluation of some Iranian OHRQoL studies shows that the majority of such studies have been carried out in three cities of Isfahan, Kerman and Babol. In this context, mention should be made of the large number of valuable studies carried out in Isfahan by Khadem and Jabarifar et al. The reason for not carrying out such studies in other cities in Iran might be a lack of familiarity with OHRQoL theory. Therefore, attempts should be made to make Iranian researchers familiar with this relatively new clinical field. On the other hand, less than half of the articles mentioned above have been indexed at Pubmed. Therefore, another recommendation is attempting to validate future studies in this field. There are also few studies of specific treatments on general quality of life, so new researches are needed to evaluate the treatment of existing disease, the prevention of disease and the enhancement of health. This new perspective shifts the focus of researchers from the oral cavity alone to the patient as a whole. Hence, the concept of OHRQoL can make an invaluable contribution to the dental research.

Conflict of Interests

Authors have no conflict of interest.

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