Instruments used to measure the quality of life related to oral health: integrated review

Instrumentos utilizados para medir a qualidade de vida relacionada à saúde oral: revisão integrativa

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ABSTRACT

This study aimed to identify the instruments used to measure the quality of life related to oral health (HRQoL) as well as the measures that were adapted for the Portuguese language of Brazil. This is an integrative review whose inclusion criteria were papers in Portuguese, English and Spanish, published and indexed in databases Medline (PubMed) and Virtual Health Library (BVS). One thousand two hundred and sixty papers submitted, fifty-five were considered eligible for review, from which the following information was extracted: instrument; composition; community; sample size; measured domains / dimensions; and author, year, country. Subsequently, the data related to the translation and cultural adaptation processes for the Portuguese language of Brazil were collected in order to evaluate the psychometric properties of each study. The studies of this review show that the HRQoL theme has remained in evidence since the creation of the first instruments and seems not to be close to being exhausted. Of the 36 instruments presented, only 17 articles were identified in the databases assessed for cross-cultural adaptation to Brazilian Portuguese and validation of psychometric properties. Thus, despite the enormous dissemination of instruments, the need for translation, adaptation in the language and analysis of psychometric properties was pointed out in this study.

Indexing terms: Oral health. Quality of life. Social impact of disease.

RESUMO

Objetivou-se identificar os instrumentos utilizados para medir a qualidade de vida relacionada à saúde bucal (QVRSB) bem como as medidas que foram adaptadas para a língua portuguesa do Brasil. Trata-se de uma revisão integrativa, cujos critérios de inclusão foram artigos nos idiomas português, inglês e espanhol, publicados e indexados nas bases de dados Medline (PubMed) e Biblioteca Virtual em Saúde. Dentre os 1.260 artigos levantados, 55 foram considerados elegíveis para a revisão dos quais se extraíram as seguintes informações: instrumento; composição; público-alvo; tamanho da amostra; domínios/dimensões medidas; e autor, ano, local. Posteriormente, foram levantados os dados referentes aos processos de tradução e adaptação cultural para o idioma português do Brasil com a finalidade de avaliar os dados referentes às propriedades psicométricas de cada estudo. Os estudos desta revisão

mostram que a temática QVRSB se mantem em evidência desde a criação dos primeiros instrumentos e parece não estar perto de se esgotar. Dos 36 instrumentos apresentados, apenas 17 artigos foram identificados nas bases de dados avaliadas quanto a adaptação transcultural para o idioma português do Brasil e validação das propriedades psicométricas. Assim, apesar da enorme difusão de instrumentos, a necessidade de tradução, adaptação no idioma e análise das propriedades psicométricas foi apontada neste estudo.

Termos de indexação: *Saúde bucal. Qualidade de vida. Impacto social da doença.*

INTRODUCTION

The quality of life parameter evaluates the impact of disease on a person's ability to perform daily activities and views the value of health in a holistic way, embracing factors other than discomfort or pain. It is therefore a broad concept, involving several dimensions: physical, mental or functional, psychological and social well-being [1,2].

Health-related quality of life (HRQoL) is a multi-dimensional concept, encompassing domains associated with physical, mental, emotional, and social functioning. It goes beyond the immediate implications of diseases and treatments and looks at how any of the dimensions affects quality of life [3].

Recent efforts have been devoted to designing tools to broaden the traditional disease-focused oral health perspective and incorporate the social and psychological consequences of oral diseases. The designing of indicators of quality of life related to oral health (OHRQoL) emerged from the need to understand how oral health status is subjectively perceived and to what extent they impact quality of life. This new approach attempts to replace the narrow normative systems for determining the patients' needs, and instead adopts a multidimensional perspective to give equal weight to the embedded psychosocial factors [4].

Due to the increasing number and complexity of information in this area of health, it is critical to develop strategies, in the context of evidence-based research, to reconcile more objective methodological steps and information found in several studies with data on subjective findings. In this sense, an integrative review emerges as a methodology that combines qualitative and quantitative findings to arrive at a fuller understanding of a topic and as such, it provides a larger applicability of the data obtained [5].

Thus, given the importance of the overall quality of life in health research and the diversity of existing instruments used to assess oral health, the present study aims to identify the instruments used to measure OHRQoL, as well as those that have been adapted to the Brazilian Portuguese. We expect this review study may contribute to help researchers in the choice and designing of new instruments to fill the currents gaps in the area.

METHODS

This integrative review study surveyed the electronic Medline (PubMed) and Virtual Health Library (VHL) databases to provide answers to the guiding question: Which are the instruments used to measure quality of life related to oral health, and which of them were adapted to Brazilian Portuguese? The keywords used to search for the studies were chosen based on the Health Sciences Descriptors (DeCS) and Medical Subject Headings (Meshterms), combined in two ways: 1) "quality of life" AND "oral health" AND "disease impact profile"; and 2) "quality of life" AND "oral health" AND "reproducibility of results". Table 1 shows the number of articles identified in each database from the keyword/ MeSH combinations. The bibliographic survey was carried out between August and October 2018 without limitation by date of publication.

For advanced search in PubMed the following filters were selected: "all fields"; "article type", and "jounal article"; "English", "Portuguese", and "Spanish" were chosen as filters for "languages", " For the VHL database survey, the search was carried out by selecting "all indices", "integrated method" and "all sources". The filter was restricted to "document type", "articles", and for "language", and "English", "Portuguese" and "Spanish" were selected. Articles were processed by the Mendeley software, and duplicate articles were excluded.

We included documents (written in the form of articles) describing the construction of instruments to measure the OHRQoL and / or its validation of the Brazilian Portuguese version. Case studies and literature review were excluded since they did not meet the purpose of the study.

Table 1 – Search strategy and numbers of articles found in each database.

Search strategy (Descriptors/MeSH)	PubMed (Medline)	VHL	Total
"quality of life" AND "Oral health" AND "Sickness Impact Profile"	341	359	700
"quality of life" AND "Oral health" AND "Reproducibility of Results"	290	270	560
Total	631	629	1.260

The review was based on the Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines. We read the titles of the articles and excluded those unrelated to the topic of quality of life and oral health. Abstracts were also read, and we excluded those who did not meet the inclusion criteria. Articles whose titles and abstracts were not clear for inclusion or exclusion were maintained for the following stage. i.e., reading the article in its entirety. Finally, we selected the articles read in full that met the inclusion criteria. This procedure was complemented by a manual search in the reference section of these articles. The process was independently performed by two researchers. The disagreements were resolved by a third researcher.

Then, 1,260 studies were initially selected, and 670 were excluded due to duplicity, leaving 590 for further analysis. Subsequently, 486 articles were excluded after title analysis. Of the remaining 104, 51 were excluded after abstract analysis. At this stage, 53 remained, of which six were excluded because they did not present original instruments but rather variations of existing instruments, and eight were added through the retrieval of the references of previously selected articles. At the end, 55 articles answered the guiding question of this review and were therefore included (figure 1).
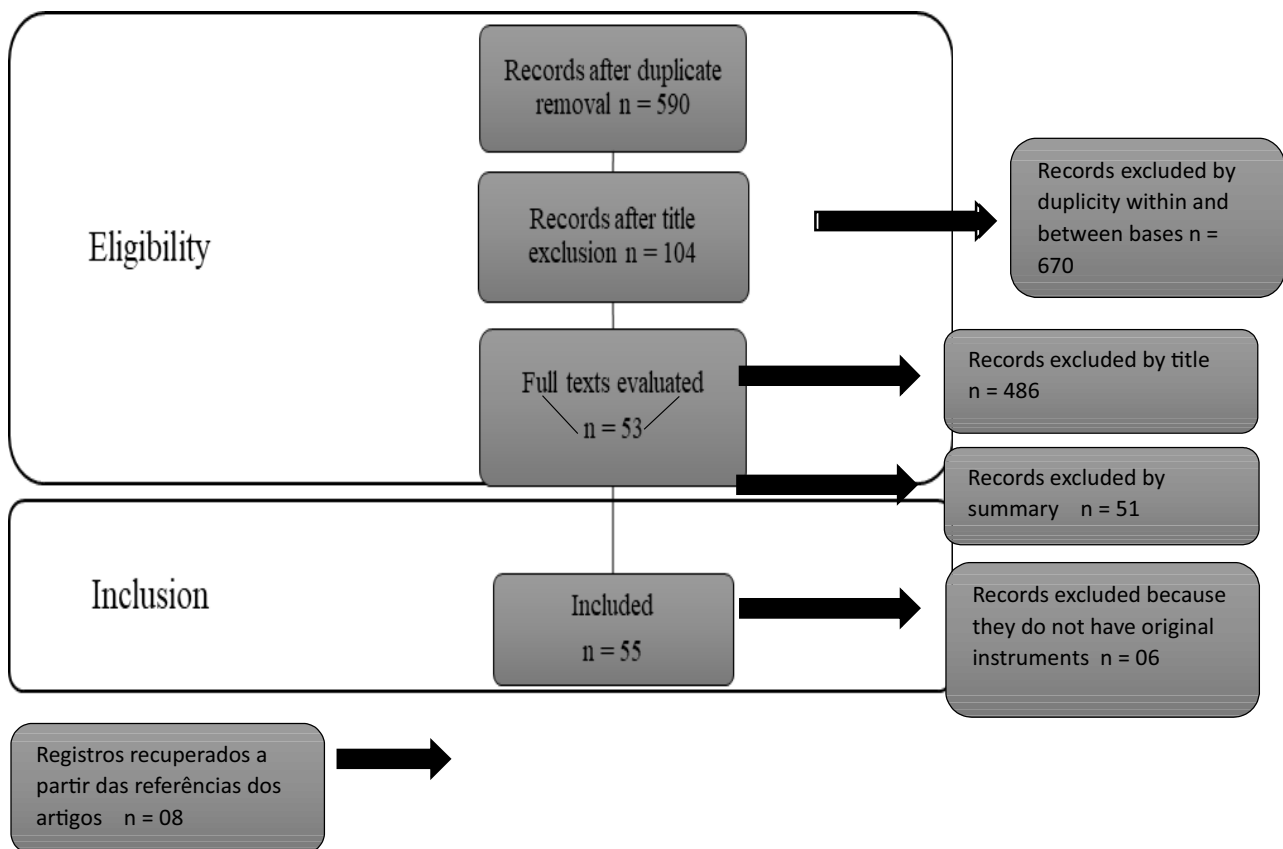
Figure 1 – Flowchart of the process of identification and selection of articles for inclusion in the integrative review.

Initially, data extraction was performed using a spreadsheet prepared by the authors, including the following information: instrument; composition; target audience; sample size; assessed domains / dimensions, along with author, year, and place.

Just to demonstrate the results, the sample size was organized in three groups, with less than 200 participants, greater than or equal to 200 participants and less than 500, and equal to or greater than 500 individuals.

Each instrument distributes its questions / items within domains / dimensions related to different aspects of the impact of the oral condition on the quality of life. In this study, the theoretical model proposed by Locker [6] was used to categorize the instruments by adjusting them in four domains: functional aspects; social aspects; psychological aspect; pain and discomfort.

Subsequently, information regarding the translation and cultural adaptation processes for Brazilian Portuguese was collected in order to evaluate the data on the psychometric properties of each study.

The intraclass correlation coefficient (ICC) is one of the most used tests to estimate the stability of continuous variables, values greater than 0.7 are considered satisfactory. Cronbach's alpha coefficient is more used to assess internal consistency, however, there is no consensus regarding its interpretation, with values greater than 0.7 considered ideal, and below 0.70 - but close to 0.60, considered satisfactory [7,8].

For criterion validity, values close to 1 indicate that there is a correlation, while values close to 0 indicate that it does not exist, with correlation coefficients of 0.70 or higher being desirable. In order to verify the construct validity, forecasts are generated based on the construction of hypotheses, and these forecasts are tested to support the validity of the instrument, positive results are pointed out when 75% are in accordance with these hypotheses [7].

The criteria of equivalence and content validity have not been demonstrated due to their lack of performance in most of the studies evaluated.

RESULTS

In the present study the unit of analysis was the instruments used to measure OHRQoL, and 36 instruments were identified.

The retrieved articles were published between 1989 and 2018, as can be seen in figure 2. In 25% of the articles, the date is before the 2000s [9-18] and most instruments were published from that date, corresponding to 75% [19-44].

Table 2 presents the main characteristics of the instruments used for the evaluation of the OHRQoL, displaying the instruments, their composition, the target audience, sample size, the dimensions evaluated, author, year and place of research. It should be noted that there is no similarity in the number of items, with questionnaires varying from 05 [30] to 49 items [13].

The target public was somehow evenly distributed: 36% adults and elderly [9-17,19,25,39,41,42], 36% to children [20-24,26-28,30,34-36,44], while the other account for patients with specific oral problems [18,29,31-33,37,38,40,43], with 28%.

The sample sizes of the studies were then grouped and in 30.5% the sample was smaller than 200 participants [18,21,23,25,26,29,30,32,37,40,41,43], 33.5% greater than or equal to 200 participants and less than 500 [17,19,20,22,28,31,33,35,38,42,44] and 36% equal to or greater than 500 individuals [9-16,24,27,34,36,39].

Most of the instruments evaluated the functional aspects (94.4%) [9-19,21-24,26-44], followed by the social (91.7%) [9-13,16,18-44], and psychological aspects (86.1%) [9-11,13-16, 18,21-32,34-44], while only 30.5% addressed issues related to pain and discomfort [9,10,12-14,16, 21-23,28,33].

The studies were predominantly conducted in North America (44.5%) [10-12,17,20-23, 27-30,34,36,42,44], followed by Europe (36%) [9,19,25,26,31-33,35,37,38,40,41], Oceania (8.3%) [13, 16, 43], Asia (5.5%) [15, 24], South America (2.8%) [14] and a multicenter study (2.8%) performed in the United States, Germany and Israel [39].
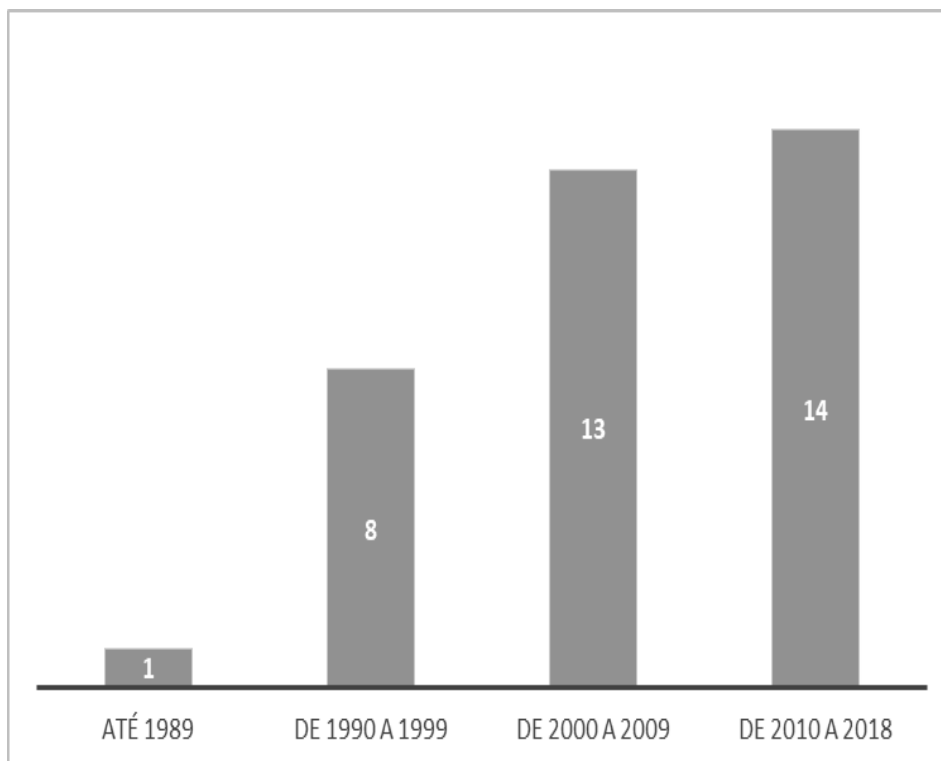
Figure 2 – Number of articles included in the integrative review according to the publication period.

Table 2 – Characteristics of the instruments for assessing the impact of oral problems on quality of life.

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Instruments	Number of items	Target audience	Sample size	Domains / Measured dimensions	Author, year and location
Social Impacts of Dental Diseases	14	Adults	618	Difficulty in eating, communication, pain and discomfort and dissatisfaction with aesthetics	Cushing et al., [9], 1986 / Inglaterra
The Geriatric Oral Health Assessment Index (GOHAI)	12	Elderly	1755	Difficulty eating, personal relationships, worry or dissatisfaction with appearance, pain and discomfort	Atchison & Dolan [10], 1990 / Estados Unidos
Dental Impact Profile	25	Elderly	1018	Difficulty in eating, appearance for others and for oneself, sense of well-being, humor, social life and social relations	Strauss & Hunt [11], 1993 / Estados Unidos
Subjective Oral Health Status Indicator	42	Adults and the elderly	553	Difficulty in eating, communication, symptomatology and social relations	Locker & Miller [12], 1994 / Canadá
Oral Health Impact Profile (OHIP)	49	Adults and the elderly	535	Functional limitation, physical pain, psychological discomfort, physical disability, psychological disability, social unfitness and disability	Slade & Spencer [13], 1994 / Austrália
Dental Impact on daily living (DIDL)	36	Adults	662	Comfort, Appearance, Pain, Performance and Food Restriction	Leão & Sheiham [14], 1996 / Brasil
Oral impacts on daily performance (OIDP)	9	Adults	501	Performance of chewing, communication, oral hygiene, sleep and emotional control	Adulyanon et al. [15], 1996 / Tailândia

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Short-form oral health impact profile (OHIP-14)	14	Adults and the elderly	1217	Functional limitation, physical pain, psychological discomfort, physical disability, psychological disability, social unfitness and disability	Slade [16], 1997 / Austrália
Oral health-related quality of life instrument for dental hygiene	36	Adults and the elderly	321	State of symptoms, functional status and health perceptions	Gadbury-Amyot et al. [17], 1999 / Estados Unidos
Orthognathic Quality of Life Questionnaire (OQLQ)	22	Patients with dentofacial deformities	88	Social aspects of dentofacial deformity, facial aesthetics, oral function and dentofacial aesthetic awareness	Cunningham et al. [18], 2000 / Inglaterra
Oral Health Quality of life UK	16	Adults	390	Daily, social and conversation activities	McGrath & Bedi [19], 2001 / Inglaterra
Family Impact Scale (FIS) - COHQoL	14	Parents and guardians of children	266	Family activities, parents' emotions, conflicts and family finances	Locker et al. [20], 2002 / Canadá
Child Perceptions Questionnaire (CPQ 11-14) - COHQoL	37	Children 11 to 14 years	83	Oral symptoms, functional limitation, emotional limitation and social well-being	Jokovic et al. [21], 2002 / Canadá
Parental perceptions of child oral health-related quality of life (P-CPQ) - COHQoL	31	Parents and guardians of children	208 (etapa 1) / 231 (etapa2)	Symptoms, functional limitations, emotional well-being and social well-being	Jokovic et al. [22] 2003 / Canadá
Child Perceptions Questionnaire 8-10 (CPQ 8-10) - COHQoL	25	Children 08 to 10 years	68	Oral symptoms, functional limitation, emotional limitation and social well-being	Jokovic et al. [23], 2004 / Canadá
Oral health-related quality of life index (CHILD-OIDP)	8	Children 11 to 12 years	513	Daily activities related to physical, psychological and social performances	Gherunpong et al. [24], 2004 / Tailândia
Psychosocial impact of dental aesthetics questionnaire (PIDAQ)	23	Adolescents e adults	194	Dental self-confidence; Social impact; Psychological impact and concern with aesthetics	Klages et al. [25], 2006 / Holanda
Impact of Fixed Appliances Measure (IFAM)	43	Children and 10 to 18 years	66/28	Aesthetics; functional limitation; dietary impact; impact of oral hygiene; impact on maintenance; physical impact; social impact; time constraints; travel / cost / inconvenience implications	Mandall et al. [26], 2006 / Inglaterra
Child Oral Health Impact Profile (COHIP)	34	Children 08 to 15 years	523	Oral health, functional well-being, social / emotional well-being, school environment and self-image	Broder et al. [27], 2007 / Estados Unidos
Early childhood oral health impact scale (ECOHIS)	13	Children 2 to 5 years, parents and guardians of children	295	Impact of the child (symptoms, function, psychological, self-image / social interaction) Impact of the family (parents' distress, family function)	Pahel et al. [28], 2007 / Estados Unidos
Patient-Reported Oral Mucositis Symptom (PROMS) scale	10	Patients with oral mucositis	34	Physical well-being, Social / family welfare, Emotional well-being, Functional well-being	Kushner et al. [29], 2008 / Canadá
PedsQL™ Oral Health Scale	05	Parents, adolescents and guardians of children	126 (fase 1) / 34 (fase 2)	Aspects physical, emotional, social, school, and oral health domains	Steel et al., [30], 2009 / Estados Unidos
Oral health-related quality of life for dentine hypersensitivity (DHEQ)	48	Patients with dentin hypersensitivity	268	Restrictions, adaptation, social impact, emotional impact and identity	Boiko et al. [31], 2010 / Inglaterra

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Instruments	Number of items	Target audience	Sample size	Domains / Measured dimensions	Author, year and location
Prosthetic quality of life (PQL)	11	Patients with removable prostheses	123	Physical, psychological and social well-being	Montero et al. [32], 2011 / Espanha
Chronic Oral Mucosal Diseases Questionnaire (COMDQ)	26	Patients with chronic diseases of the oral mucosa	260	Pain and functional limitation; medications and side effects; social and emotional support and patient support	Ni Riordain & McCreary [33], 2011 / Irlanda
Pediatric Oral Health-Related Quality of Life (POQL)	10	Childrens	3400	Physical Functionality, Functional Function, Social Functionality and Emotional Functioning	Huntington et al. [34], 2011 / Estados Unidos
Scale of Oral Health Outcomes for 5-year-old children (SOHO-5)	07	Children 05 years	296	Physical, psychological and social aspects	Tsakos et al. [35], 2012 / Escócia
Child Oral Health Impact Profile-Short Form (COHIP-SF 19)	19	Childrens	1175	Oral Health, Functional Welfare, and Sociow-Emotional Well-Being	Broder et al., [36], 2012 / Estados Unidos
Quality of Life with Implant-Prostheses (QoLIP-10)	10	Prosthesis users	150	Biopsychosocial dimension, aesthetic-dento-facial dimension and performance dimension	Preciado et al. [37], 2013 / Espanha
Oral health-related quality of life for dentine hypersensitivity DHEQ -15	15	Patients with dentin hypersensitivity	353	Restrictions, adaptation, social impact, emotional impact and identity	Machuca et al. [38], 2014 / Inglaterra
Positive Oral Health and Well-Being (POHW)	15	Adults	619	Subjective-psychological attributes, Functional attributes, biological-physical attributes	Zini et al. [39] 2016 / Estudo Multicêntrico – Estados Unidos, Alemanha e Israel
Quality of Life related to Function, Aesthetics, Socialization, and Thoughts about health-behavioural habits (QoLFAST-10)	10	Prosthesis users	107	Social dimension, aesthetic dimension, functional dimension and thoughts about behavioral habits in health	Castillo-Oyague et al. [40], 2016 / Espanha
Malocclusion Impact Questionnaire (MIQ)	17	Adolescents with malocclusion	184	Teeth appearance, social interactions, and oral health and function	Benson et al. [41], 2016 / Inglaterra
Quality of life questionnaire for patients with oral potentially malignant disorders (OPMD QoL)	20	Patients with potentially malignant oral disorders	150	Difficulties with diagnosis, physical disability and functional limitations, psychological and social well-being and treatment in daily life	Tadakamadla et al. [43], 2017 / Austrália
Child Oral Health Impact Profile – Preschool version (COHIP-PS)	11	Children 02 to 05 years	327	Oral health, functional well-being, social well-being and self-image	Ruff et al. [44], 2017 / Estados Unidos

It should be noted that 19 articles discussed the process of adaptation to Brazilian Portuguese. Two articles focused only on semantic equivalence, without any psychometric data and therefore were not included in Table 3. One of them dealt with a reduced version of Oral Health Impact Profile (OHIP) [45] and another focused on the ECOHIS [46].

Table 3 presents the 17 instruments with their respective psychometric properties. For analysis, the quality criteria proposed for the measurement properties of health status questionnaires by Terwee et al. [7].

Table 3 –Description of the psychometric properties of the Portuguese language versions of instruments developed in the context of the OHRQoL.

Instruments	Author / Year	Internal consistency		Reliability		Construct validity		Discriminant validity	
		Statistical test	Result	Statistical test	Result	Statistical test	Result	Statistical test	Result
OHQL UK	Dini et al. [47], 2003	Cronbach`s alpha	0,96	Kappa	0,57 – 0,87	Spearman's Correlation Coefficient	+	*	+
OHIP-14	Oliveira & Nadanovsky [48], 2005	Cronbach`s alpha	0,91	ICC	0,87	Mann-Whitney	0,76	*	*
OHIP	Pires et al. [49], 2006	Cronbach`s alpha	0,90	Kendall-tau	0,72 - 0,74	Kruskal-Wallis e Mann-Whitney	p <0,05	*	*
CPQ 11-14	Goursand et al. [50], 2008	Cronbach`s alpha	0,86	ICC	0,85	Spearman's Correlation Coefficient	+	*	*
ECOHIS	Martins-Jr [51], 2012	Cronbach`s alpha	0,86	ICC	0,94	Spearman's Correlation Coefficient	+	*	*
CHILD-OIDP	Castro et al. [52], 2008	Cronbach`s alpha	0,63	Kappa ajustado / ICC	0,76 / 0,79	Kruskal-Wallis	+	*	*
CPQ 8-10	Martins et al. [53], 2009	Cronbach`s alpha	0,92	ICC	0,96	Spearman's Correlation Coefficient	+	Kruskal-Wallis	There was a statistically significant difference between clinical groups
FIS	Barbosa & Gavião [54], 2009	Cronbach`s alpha	0,87	ICC	0,90	Spearman's Correlation Coefficient	+	*	*
P-CPQ	Goursand et al. [55], 2009	Cronbach`s alpha	0,84	ICC	0,83	Spearman's Correlation Coefficient	+	Mann-Whitney	The difference between the groups did not reach statistical significance (p> 0.05).
GOHAI	De Souza et al. [56], 2010	Cronbach`s alpha	0,72	*	*	Spearman's Correlation Coefficient	+	*	*
PIDAQ	Sardenberg et al. [57], 2011	Cronbach`s alpha	0,75-0,91	ICC	0,89-0,99	*	*	*	*
OQLQ	Bortoluzzi et al. [58], 2011	Cronbach`s alpha	0,78-0,89	ICC	0,94	*	*	*	*
PedsQL™ OHS	Bendo et al. [59], 2012	Cronbach`s alpha	0,65/0,59	ICC	0,90/0,86	Spearman's Correlation Coefficient	+	T-test	There was a statistically significant difference between groups
SOHO-5	Abanto et al. [60], 2013	alfa de Cronbach	0,90/0,77	ICC	0,98/0,92	Spearman's Correlation Coefficient	+	Mann-Whitney	+

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Instruments	Author / Year	Internal consistency		Reliability		Construct validity		Discriminant validity	
		Statistical test	Result	Statistical test	Result	Statistical test	Result	Statistical test	Result
OIDP	Abegg et al. [61], 2015	alfa de Cronbach	0,69	ICC	0,69	Kruskal-Wallis	*	Kruskal-Wallis	There was a statistically significant difference between groups
DHEQ-15	Douglas-De-Oliveira et al. [62], 2018	alfa de Cronbach	0,945	ICC	0,959	Mann-Whitney	+	Mann-Whitney	+
IFAM	Rebouças et al. [63], 2018	alfa de Cronbach	0,89	ICC	0,81	Spearman's Correlation Coefficient	+	Student t-test	There was a statistically significant difference between groups

* Not done or not applicable. ICC - Intraclass correlation coefficient

All articles searched for the psychometric parameter related to internal consistency and the outcome for this parameter was satisfactory in all studies. Regarding the other parameters, although some articles did not clearly present their findings, indications of validity, such as stability, construct validity and criterion, were present.

In the instruments that presented the stability parameter, results greater than 0.7, therefore satisfactory, were found, with the exception of the OIDP instrument [61], which achieved a close result (ICC = 0.69).

There was no uniformity in the tests performed by the instruments to verify the construct validity, however, positive results were found in the instruments that presented this parameter. For criterion validity, different tests and desirable results were used in most studies that met this criterion [47, 53, 59, 60-63].

DISCUSSION

The studies surveyed confirm the pervasive concern of dental professionals and researchers to evaluate the impact of the oral health status on the quality of life of the people. This was demonstrated by the recent development of new instruments, with 75% [6-32] of the articles retrieved being published in the last 18 years.

Although there is a growing consensus on the multidimensionality of measuring quality of life, it is not possible to point out an explicit clarity or agreement on the terms 'quality of life' and 'health-related quality of life', since part of the authors did not conceptualize the items to be measured as indicated by similar work [64].

Its should emphasize that the indicators were developed in the form of questionnaires composed of clear and objective questions about the OHRQoL; however, there is no standardization in the number of items of these instruments. There is a perceived need to decrease the number of items of those instruments, previously constructed with too many questions. Such is the case of OHIP, which in its original version has 49 items [13], prompting researchers to develop a 14-item reduced version [16].

The first instruments were developed for the elderly and adults [9-17]. Later, new instruments were designed for other target audiences, such as in children of different ages [21, 23, 24, 26-28, 30, 34-36, 44]. this result was also verified in a review like this [65].

These instruments cover different age groups, such as preschool and school age, and the instruments are available for self-completion by the child or by parents' representatives [20,22,28,30].

Adolescents have also been included in the OHRQoL measurements more recently [25,26,30,42], and there is a growing trend in designing instruments for target audiences with specific oral problems [18, 29, 31-33, 37, 38, 40, 41, 43]. This is the case of QoLFAST-10 [40], which assesses prosthesis users, MIQ [41] for patients with malocclusion and OPMD QoL [43] for patients with potentially malignant oral disorders.

The availability of a wide variety of quality of life instruments will make it easier for researchers to choose the best instruments for their research [65]. Thus, reviews like this become essential to inform other researchers and program evaluators about the variety of instruments available in the literature.

This concern in broadening the target audience is justified, since subjective indicators should be interpreted as important contributions to clinical evaluations, helping diagnosis accuracy, and to the identification of vulnerable individuals or population groups who require complex or customized interventions [66].

The information provided by these instruments has the potential to help determine treatment needs, select therapies, monitor the progress of treatment and evaluate the results of intervention in the context of research, clinical practice or policy formulation [23].

In addition, the instruments specifically developed for a specific target audience, may be more sensitive to capture the impact of oral disease on their quality of life than the information obtained through a quality of life instrument for adults among children and adolescents [65].

Regarding the sample size, there was a predominance of samples with a number of participants equal to or greater than 500 individuals. The knowledge of the different types of sampling, as well as the correct calculation of the sample size, are fundamental points for the success of a scientific research. For the statistical inference to be valid, it is necessary that the selected sample is representative of the population from which it was taken, because poorly selected samples and of inadequate size, compromise the research result, since they do not faithfully represent the population [67].

The conceptual model used to assess oral health status proposed by Locker [6] is based on the classification of impairment, disability and handicaps of the World Health Organization, which attempts to capture all possible functional and psychosocial outcomes of oral disorders.

The publication of this conceptual hallmark has been fundamental for the development of this area of research in Dentistry. Until recently, the psychosocial implications of oral health status have received little attention, because they are rarely life-threatening. In addition, the oral cavity has historically been dissociated from the rest of the body when considering general health status [67]. However, several studies have pointed out that oral disorders have as serious emotional and psychosocial consequences as other disorders [10-15].

Thus, studies on OHRQoL should address dimensions such as pain and discomfort, functional aspects concerning the ability to chew and swallow food without difficulty, speaking and pronouncing words correctly, psychological aspects regarding appearance and self-esteem, as well as social aspects, reflecting social interaction and communication.

Although this was not the theoretical framework adopted by all authors, the instruments were adjusted to make it possible to assess the four domains proposed here. Its found that the functional, social and psychological domains have become increasingly important, accounting for 86.1% to 94.4% of the instruments reviewed.

Although dentistry has made great progress towards a more comprehensive measurement of the population's oral health needs, it is necessary to overcome the focus on sick patients and theories of disability to incorporate healthy patients into HRQoL measures [64].

Its should like to draw attention to the Positive Oral Health and Well-Being (POHW) instrument [39], which innovates by proposing a positive perspective on oral health attributes, unlike other existing instruments, which focus on negative, disease-oriented perception of oral health.

Regarding the construction site of the instruments, it is observed that most of them were built in North America and published in the English language, agreeing with similar revisions [64, 65]. This may reflect a lack of interest in evaluating HRQoL in other regions of the world, making it urgent to conduct research on the topic in other countries to identify and / or modify scales, to adapt them to the given context and characteristics of the specific health system, as well as the socioeconomic and cultural aspects of a given population [64].

In the present study, only 17 articles discussed cross-cultural adaptation studies for Brazilian Portuguese and validation of psychometric properties and this should be cause for concern, since some instruments consolidated abroad have been used in research studies in Brazil without proper validation. This gap should encourage researchers in Brazil to conduct studies to validate such instruments.

The studies are unanimous in considering reliability and validity as the main measurement properties of instruments. Reliability assesses how stable, consistent or accurate an instrument is and mainly concerns the stability, internal consistency and equivalence of a measure. Validity indicates whether an instrument evaluates exactly what it proposes to measure, the main types are, content validity, criterion validity and construct validity [8].

CONCLUSION

The studies in this review show that the HRQoL theme has remained in evidence since the creation of the first instruments more than 30 years ago, and it does not seem to be close to being exhausted considering a new strand of instruments that relate specific oral conditions with the impact on the quality of life. life. Still, the researchers' concern is to get as close as possible to the subject's perception by creating questionnaires aimed at different audiences.

Of the 36 instruments identified, only 17 articles were identified in the databases assessed for cross-cultural adaptation to the Brazilian Portuguese language and validation of psychometric properties. Thus, despite the enormous dissemination of instruments, the need for translation, adaptation in the language and analysis of psychometric properties was pointed out in this study.

Collaborators

MV Calmon worked on the conception, design of the project, methodology, data collection, analysis and interpretation and article writing. DB Velten worked on the conception, data collection and article writing. APSC Almeida worked on the conception, design of the project, methodology, analysis and interpretation and critical article review. FMC Leite worked on the conception, design of the project, methodology, analysis and interpretation and critical article review. MHMB Miotto worked on the conception, design of the project, methodology, analysis and interpretation and critical article review.

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