Validation of the Child Perceptions Questionnaire 8-10 in Bosnia and Herzegovina

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ABSTRACT
Background: Paediatric oral disorders are numerous and it can be assumed that those have negative effect on the life quality in children. From 2002 to 2006 were developed the life quality measures for children aged 8-10 and 11-14 years, Child Perceptions Questionnaires, CPQs. Those are the components of the Child Oral Health Quality of Life Questionnaire (COHQOL). Aim: The aim of this study was to translate the CPQ for children 8 to 10 years into the one of the languages in Bosnia and Herzegovina, to cross-culturally adapt the instrument, and to evaluate its comprehensibility among Bosnian language speaking children. Methods: Instrument was translated from English into the Bosnian language according to the recommended translation procedure. After the cultural adaptation, questionnaire was tested among 8–10 years old children (N=18). Results: During the cultural adaptation of the instrument, changes were made on three questions. One question had to be changed due to understanding difficulties. Conclusion: CPQ8–10 was translated and culturally adapted. Testing among children showed that the Bosnia-Herzegovina version of the CPQ8–10 is comprehensive and it can be used for measuring oral health-related quality of life in children this age.
Key words: CPQ8-10, translation, validation.

1. INTRODUCTION
Oral health-related quality of life (OHRQoL) is an important aspect of dental health. It describes the patient’s self-perception of his or her current oral health status and its impact on his or her quality of life (1). Questionnaires for assessing oral health-related quality of life were mostly developed in English speaking regions and therefore cannot be used in all countries. It is the reason why the translation and verification of those instruments are very important for precise and correct measurement of the life quality.

Questionnaires for adult population and for children 11 to 14 years have already been translated in Bosnia and Herzegovina (2, 3). In 2007, was developed the Early Childhood Oral Health Impact Scale (ECOHIS), with 13 items, for assessing oral health quality of life in children 3-5 years of age (4). The ECOHIS has been developed in the United States and it is a caregiver-rated questionnaire.

Measuring the OHRQoL in children, using the self-reported questionnaires, is associated with several difficulties. The children’s abilities to speak, read, think in abstract terms and their age-related ability to understand the concepts used in the questionnaire should be taken into account during the development of the OHRQoL instruments (5).

The Child Perceptions Questionnaires (CPQs) have been developed from 2002 to 2006 in Canada for measuring the OHRQoL among children aged 6 to 14 years (6, 7, 8). The CPQs are self-reported questionnaires. Many researches have demonstrated that children’s reports of their health-related quality of life are valid and reliable (6).

The CPQs include four domain subscales of oral symp-
toms, functional limitations, emotional well-being and social well-being.

2. GOAL

The aim of this study was to translate the English version of the CPQ8-10 (Appendix 1) into one of the languages of Bosnia and Herzegovina, to culturally adapt the questionnaire according to the Bosnia and Herzegovina setting, and to evaluate its comprehensibility in a qualitative study.

3. METHODS

Original instrument

The original English version of the CPQ8-10 contains a total of 25 items: 5 questions on oral symptoms, 5 questions on functional limitations, 5 questions on emotional well-being and 10 questions on social well-being. Questionnaire has the introduction and two general questions about the age and the sex of the child. The main part of the questionnaire has 25 questions, numbered in standard order (from 1 to 25, see Appendix 1).

The response format for all main 25 questions is a Likert-like scale. Response options and scores are: "never", scoring 0, "once or twice", scoring 1, "sometimes", scoring 2, "often", scoring 3 and "every day or almost every day", scoring 4.

An overall CPQ8–10 score should be computed by addition of all item scores, and scores for each of the four domains also. The total score can vary from 0 to 100. The questions should, according to the authors of the original questionnaire, refer to the period of the past 4 weeks.

Translation of the CPQ8-10 questionnaire

The English CPQ8-10 version (Appendix 1) was translated into one of the languages in Bosnia and Herzegovina using the forward-backward technique for translating questionnaires (9). Translation from English into Bosnian was performed by four native-speaking Bosnian investigators. First translator was a dentist, previously participated in the translation of the Oral Health Impact Profile and the CPQ11-14 (2,3). Second translator was the pediatrician who works with children on daily basis, and who participated in the development of the CPQ11-14 (3). Third translation was made by a certified translator. All three translations were debated by another licensed translator. This translated version was compared to the original questionnaire.

Cultural adaptation of the CPQ8-10

Procedure for cross-cultural adaptation was conducted according to the internationally accepted methods (10). Bosnia and Herzegovina version was reviewed once again by the dentist and the pediatrician. The criteria of clarity, through the use of simple, easily understood expressions, and avoiding the use of technical terms, were also evaluated, beside the criteria of crossing cultural differences between Canada and Bosnia-Herzegovina.

Field study for assessing the comprehensibility of the questionnaire

After the preliminary version of BH-CPQ8-10 was made, we assessed its comprehensibility in a qualitative study.

To be included in the study, children had to be 8-10 years old and native Bosnian-speakers. The field study was carried out in The Canton Health Centre “Dom zdravlja Stari Grad”, Sarajevo, Department of Dentistry and in The Department of Pediatrics-School Section. All children were interviewed while waiting for the appointment at the pediatrician or the dentist, regardless they had some acute dental/general health problem or not. The BH-CPQ8-10 was applied in a form of an interview. The questionnaire referred to the past four weeks. We focused on the comprehensibility of the words used in every item and on the sentence construction. Subjects were randomly selected (N=18).

The introduction, two general and 25 main questions were read to the children from the printed questionnaire. Interviewer wrote the answers.

Time required for the completion of the questionnaire was not measured individually for each child, because the aim of the study was to test the language characteristics and comprehensibility of the questionnaire only. Answers were not statistically analyzed, because this was a qualitative study on the comprehensibility of the questionnaire.

Study was in accordance with the ethical standards and Declaration of Helsinki. For every child a written consent from the caregiver was obtained before a child’s verbal assent.

4. RESULTS

Comparison between the original and the back-translated version demonstrated that two versions are more or less equivalent, which called for only minor adjustments of the Bosnia-Herzegovina version.

During the cross-cultural adaptation, we made changes on three questions.

In original question no. 7: „Have you had a hard time biting or chewing food like apples, corn on the cob or steak, because of your teeth or mouth?” we changed the word “steak”, which could be translated in Bosnian language as „odrezak”, into „meso/meat”, which is more suitable for the nutritional habits of children in Bosnia and Herzegovina, and more comprehensive to them.

In question no. 12, we changed the Bosnian word „frustriran”, to the more simple word „nezadovoljan”.

In question no. 23: „How often did you stay away from activities like sports and clubs because of your teeth or mouth?” we changed the equivalent, but not so familiar Bosnian word „klub” into „vanškolska aktivnost/extracurricular activity”.

After the cross-cultural adaptation, instrument was tested among 18 children to assess the comprehensibility. Questionnaire was applied on 11/18 or 61% girls, and 7/18 or 39% boys. Second and third child of those 18 subjects had difficulties to understand the question no. 12: “Koliko često u zadnje četiri sedmice si bio/bila nezadovoljan/na zbog svojih zuba ili usta ?”. This question was replaced with: “Koliko često u zadnje četiri sedmice si bio/bila nezadovoljan/na svojim zubima ili ustima ?” and later applied to the children that followed. After we made this change, further explanations at any question were not necessary.

We had no invalid questionnaires. All 18 children answered to every item of the questionnaire. This stage resulted with the final version of BH-CPQ8-10 (Appendix 2).
Appendix 1
Child Perceptions Questionnaire 8-10
CPQ 8-10

The English version of the CPQ 8-10 questionnaire was obtained from an Open Access article properly cited or translated.

Appendix 2
BH-CPQ 8-10

The English version of the CPQ 8-10 questionnaire was obtained from an Open Access article.
5. DISCUSSION

Measures which address the oral health-related quality of life (OHRQoL) are being used with increasingly frequency in epidemiological surveys in dentistry. Many OHRQoL measures have been developed until today (11, 12, 13). However before 2002, they were all designed to assess OHRQoL in adult populations.

The absence of pediatric OHRQoL measures, before ECOHIS and CPQs were developed is due to the specific psychological development process in children (14). Many abilities in children are age-dependent and those differences in the cognitive, emotional, functional, and behavioral characteristics must be accommodated within a child health status questionnaire (14, 15).

Early attempts at measuring the health-related QoL in children used questionnaires for parents. While parents are useful as informants, their reports for children older than 6 are now considered as complementary to and not substitutes for child reports. Analysis of the data presented elsewhere shows that the questionnaires for children older than 6 had good reliability (6, 7).

A study sample of 18 children may seem too small. One similar publication presented the validation of Portuguese version of the OHIP-49 (16). The study sample for evaluation of the language used in the instrument consisted of 10 persons selected randomly from the main sample. After this pilot-study, some items were adjusted to clarify questions, which resulting in the final version of the Portuguese OHIP-49.

6. CONCLUSION

The CPQ8-10 was translated from English into Bosnian language and culturally adapted. Comprehensibility of the measurement was tested in a qualitative study. Testing in a sample of children reveal that Bosnia and Herzegovina version of the CPQ8-10 seem to be a valid instrument for measuring oral health-related quality of life in children. Questionnaire can be useful in many aspects, in evaluating of dental therapy, in epidemiological surveys and in oral health promotion. The main purpose of this study, to make CPQ8-10 ready for use in Bosnia and Herzegovina, has been accomplished. Longitudinal studies are necessary to determine its construct validity, responsiveness, and internal consistency.

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