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Methodological aspects of Quality of Life Research

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The study of quality of life - a reliable method of assessing health and general well-being [15]. A study to evaluate QOL, physical, psychological and social well-being, and the evaluation of these components is carried out by the individual.

The study of QoL is generally accepted in international practice, a highly sensitive and economical method for assessing the health of the population as a whole, and individual social groups. The method allows to quantify the characteristics of multi-component of human life - physical, psychological and social functioning [19].

Coordination of work on the methodology and the study of QoL in medicine holds the International Society for Study of Quality of Life (International Society for Quality of Life Research - ISOQOL) and the Russian Research Center Transnational QOL (MTSIKZH), established in St. Petersburg in 1999

The general scheme of population-based study of quality of life of the adult population has carry out the following steps.

A. Development of study protocol.

Two. Approval of the protocol by the Committee on Bioethics of the Ministry of Health.

Three. Conducting a pilot study to determine the minimum amount of a representative sample.

4. Data Collection.

Five. Formation of a computer database of quality of life.

6. Scaling (recoded) data questionnaire.

7. Analysis and interpretation of data.

The first and basic step - the development of QOL study protocol. QOL research protocol - a document that develop before the start of the study and who did not change during the study. During the design phase study protocol solve such problems as the evaluation of sample size, definition of research tools, verification of inclusion criteria, etc. [16, 20, 22, 23].

The main tools for assessing QOL questionnaires are standardized. The current assessment of quality of life questionnaire developed by experts the world's leading clinical centers, and consistent with the principles of evidence based medicine and the requirements of Good Clinical Practice (GCP).

Questionnaires can be both general and specific. General questionnaires measuring a wide range of functions of perception of health and can be used to assess the quality of life of patients suffering from various diseases, as well as to assess the quality of life of the population. One of the most widely used questionnaires to assess the overall quality of life is the Short Form Medical Outcomes Study (SF-36) [4, 5, 6, 7, 8, 19].

SF-36 allows you to assess the quality of life for patients over the past four weeks. Russian version of the SF-36 was adapted and validated Multinational Quality of Life Research Center in St. Petersburg. In the study of its psychometric properties have been confirmed by the reliability, validity and sensitivity of the survey.

SF-36 meets all these requirements and is the most frequently used in population studies [22, 26].

In this regard, the SF-36 QOL assessment tool is selected in conducting population-based studies in the International Quality of Life Assessment Project [9, 11, 24, 25].

Important characteristics of the questionnaire include its psychometric properties:

• Reliability;

• Validity;
• Sensitivity to change.

Reliability - the extent to which the variable is evaluated on a scale reflects the true score, ie accuracy [17]. There are two types of reliability:

• The internal consistency;
• The reproducibility.

The internal consistency of the questionnaire can be estimated in several ways [1]:

• Cronbach's coefficient α;
• Reliability Split-half;
• Reliability Inter-rater;
• interclass correlation coefficients.

The most common way to assess the internal consistency of the questionnaire is the calculation of Cronbach's coefficient α. The values of Cronbach's α coefficient above 0.7 indicates a fairly high reliability of the scale for cohort studies [18].

Reproducibility was assessed by test-retest (test-retest). Repeatability describes the temporal stability (persistence time), that is, the degree of correlation between scores on repeated assessments.

Validity of the questionnaire (validity) - the ability to reliably measure the questionnaire that the main characteristic that it should be measured. There are several options for validity, however, the study of each of them aimed at solving the same problem - assessing the reliability performance scales of the questionnaire [25]:

• External;
• Content;
• Criterion (current and forward-looking);
• Constructive (convergent and discriminant).

The most important is the assessment of construct validity, which determines how the structure of the questionnaire can reliably measure what it should be measured [21, 22, 2, 3]. In assessing construct validity construct some hypotheses, which are based on various factors (eg psychological, social factors or clinical characteristics), and in the process of research, these theoretical assumptions prove or disprove. If the hypothesis is not confirmed, it may be difficult to validate the questionnaire or the issues of theoretical justification of the study.

Construct validity may be convergent (convergent validity) or discriminant (discriminant validity), and in both cases it requires study to evaluate the relationship of the scale with specific characteristics [25].

In assessing the convergent validity of the results of two methods for measuring a characteristic should correlate with each other.

Discriminant validity implies that the results of measurements of different characteristics are not related [12, 13, 18].

Among the methods for assessing construct validity of a method of "known groups". Respondents were divided into groups depending on the presence or absence of any factor. It has been the most likely hypothesis for the distribution of their factors and analyzes the relationship of indicators based on the factor being studied. The most obvious and simple example is the study of QoL in relation to age: For example, in many population studies using common questionnaires been suggested significant differences between the indicators of physical health in different age groups. In all cases, these assumptions have been confirmed: the respondents of older age groups, showed a lower QoL than younger respondents [21].

The sensitivity of the questionnaire - is its ability to detect changes in QOL according to possible changes in the status of the respondent (eg, in the treatment of patients) [14, 19, 20].

Thus, when conducting any research QOL, including population, the choice is an important component of the questionnaire and to determine its psychometric properties [10, 12].

References

1. Bazarova, A. Territorial differentiation of quality of life in the republic of Buryatia public /A. Bazarova// Abstract. thesis. - Ulan-Ude, 2001. – P.28.
2. Vikulov V.G. The prevalence of osteoarthritis of the knee in Irkutsk, and some risk factors in it // Proceedings of X European Congress of Rheumatology. - 1983. – P.119.
3. Gavrilova, T.V. Principles and methods of quality of life. - 2004.
4. Gordeev V., Methods of studying child development: quality of life (QOL) - a new tool to assess child development. - St. Petersburg.: Speech, 2001. – P.140.
5. Zherebin V.M. Living standards / - Moscow: UNITY-DANA, 2002. – P.160.
6. . Zhulina M.A., The quality of the population of the Volga Federal District, features of spatial differentiation // Abstract. thesis. - Voronezh, 2003. – P.25.
7. Zaytsev, AK Quality of work life // Population - 2001. – P. 155-161.
8. Karakotova A.O., Social-philosophical analysis of the quality of life // Abstract. thesis. - Stavropol, 2002. – P.27.
9. Kriulenko I.P., Population-based study of quality of life of the population of Kostroma and Kostroma Region // Bulletin of the Multinational Center of Quality of Life Research. - 2009. - № 13, 14. - P. 41-50.
10. V.A. Nasonova, Pharmacoeconomic analysis of two nonsteroidal anti-inflammatory drugs (NSAIDs) in rheumatology // Scientific-Practical Rheumatology - 2002. - № 1. - P. 63-68.
11. V.A. Nasonova, Flugalin for osteoarthritis in 48-week controlled study // Clinical Rheumatology - 1996. - № 1. - P. 25-29.
12. Nasonov EL Analgesic effects of nonsteroidal anti-inflammatory drugs for diseases of the musculoskeletal system: the balance of efficacy and safety // Consilium medicum. - 2001. - № 3 - 5. - P. 209-215.
13. Nasonov EL Nonsteroidal anti-inflammatory drugs (Perspectives in medical applications) // Sc.-Practical Rheumatology. - 2000. - № 2. – P. 16.
14. Nasonov E.L. Anti-inflammatory therapy of rheumatic diseases - M.: M-City, 1996. - P. 345.
15. Bowling, A. Social networks, health and emotional well-being among oldest old in London / A. Bowling, P. Browne // J. Gerontology. - 1991. - Vol. 46.- P. 20-32.
16. Ganbek, B. Methods for Validating and Norming Translations of Health Status Questionnaires: The IQUOLA Project Approach / B. Ganbek, J.E. Ware // J. Clin. Epidemiol. - 1998.-Vol. 51. - № 11. - P. 953-959.
17. Kazis, L.E. Effect sizes for interpreting changes in health status / L.E. Kazis, J.J. Anderson, R.F. Meenar // Medicine Care. - 1989. - Vol. 27. - P. 178-189.
18. Stewart, A. L. The MOS SF-36 shot-form general health survey / A. L. Stewart, R. D. Hays, J.E. Ware // Reliability and validity in patient population. - Ved. Care 1988.- Vol. 26. - P. 724- 735.
19. Sullivan, M. The Swedish SF- 36 Health Survey III. Evaluation of Criterion-Based Validity: Results from Normative Population / M. Sullivan, J. Karlson // J. Clin. Epidemiol.-1998.-Vol. 51. - № 11. - P. 1105-1113.
20. Novik, A.A. On the origin of St. Petersburg Quality of Life Study Group // Quality of Life Newsletter / A.A. Novik, T.I. Ionova // Ed. Mapi Research Institute. - 1998. - P. 15.
21. Cross-Cultural Comparisons of the Content of SF-36 Translations across ten Countries: Results from the IQOLA Project / A.K. Wagner, B. Gandek, N.K. Aaronson, et al. // J. Clin. Epidemiol.- 1998.- Vol. 51- №11- pp. 925-932.
22. Division of Mental Heals, World Health Organization. Study protocol for the World Health Organization: organization to develop a Quality of Life assessment instrument (WHOQOL) / WHOQOL Group // J. Quality of Life Research. - 1993. - Vol.2 - P. 153-

159.
23. Ware, J.E. Methods for testing data quality, scaling assumptions and reliability: The IQOLA Project Approach / J.E. Ware, B. Gandek // J. Clin. Epidemiol.-1998. - Vol. 51 - № 11.- P. 945-952.
24. Ware, J. Translating functional health and well-being: international quality of life assessment (IQOLA) project studies of the SF-36 health survey / J. Ware, B. Gandek // J. Clin. Epidemiol. - 1998.- Vol. 51.- № 11.- P. 1214.
25. SF-36 Health Survey: Manual and International guide / J.E. Ware, K.K. Snow, M. Kosinski, et al. // MA: New England Medical Center.- The Health Institute, Boston.- 1993. - P. 41-45.
26. Ware, J.E. Overwiev of the SF-36 Health Survey and the IQUOLA Project / J.E. Ware, B. Gandek // J. Clin. Epidemiol. - 1998. - Vol. 51. - № 11. - P. 903-912.

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