

# Influence of atopic dermatitis on the quality of life of young children

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**Abstract.** The study of QoL in pediatrics is of undoubted interest, as this opens up the possibility of a comprehensive analysis and study of the child's health. The use of indicators of the quality of life in the practice of a doctor can become an additional criterion for assessing the state of health and development of the child, the effect of the disease on the well-being of the child, as well as assessing the effectiveness of therapy.

**Key words:** atopic dermatitis, children, health, quality of life.

Relevance. Interest in the problem of studying QoL in the world is steadily increasing. The study of the quality of life of children makes it possible for an additional analysis of the state of health. According to the results of the study, it is recommended to use the international Qualin questionnaire to assess the QoL of young children with atopic dermatitis. Initially, the quality of life (CL) was considered a socio-economic category that reflects the standard of living of the population or its individual groups. The term "quality of life" was first used in 1920 by the American economist A. Pigu. According to Pig, the quality of life of an individual or society as a whole depends primarily on the level of well-being and social security [1]. In clinical medicine, the QoL indicator is included in the standards of examination and treatment of patients, with its help, individual monitoring is carried out in the process of treating the patient, assess the effectiveness of therapy and the prognosis of the disease [2]. According to the latest data, the average score of the QOL of children with chronic diseases is lower compared to the QoL of healthy children. The degree of violation of the parameters of QoL has its own characteristics depending on the pathology [3].

The hypothesis of the study was that the subjective assessment of QOL is determined by the degree of reproductive health disorders in adolescents. At the new stage of medicine development, the QOL criterion allows reviving the old principle of "treating the patient, not the disease" in a modern style.

The problem of QOL directs researchers to recognize the interests and advantages of a person over the interests of science and society.

Evaluation of the QOL of children can be the final result of assessing the effectiveness of medical intervention.

It is also important to study the quality of life of a healthy child to describe the concept of "health", without which an objective description of the disease is impossible.

Studying the QOL of healthy children allows developing standards for assessing the quality of life and applying them at the population level [5].

Interest in the problem of studying the QOL in the Republic of Uzbekistan is steadily increasing. Studying the quality of life of children provides an opportunity for additional analysis of the state of health.

One of the most well-known international tools for assessing the quality of life of young children is the general questionnaire QUALIN (Manificat S., Dazord A., France, 1997) [8]. The aim of the study: to evaluate the possibility of using the QUALIN questionnaire to study the quality of life in children with atopic dermatitis at an early age.

**Materials and methods.** The object of the study were 2362 respondents from 0 to 3 years old inclusive.

The study of the quality of life in young children was carried out using the international QUALIN tool, which can be used in both healthy and sick children.

Statistical analysis was carried out using the statistical package of the SPSS program (Statistical Package for the Social Sciences Inc., USA).

The questionnaire consists of 33 questions. Each question has 6 answer options, from - "definitely no" to - "definitely yes", as well as - I don't know."

The instrument describes four main aspects of a child's functioning: "behavior and communication" (13 questions), "ability to be alone" (5 questions), "family environment" (4 questions), "neuropsychic development and physical health" (11 questions), as well as a summary scale (total score).

The calculation is made on a 5-point system, the higher the score, the better the quality of life. Statistical analysis was performed using the statistical software package SPSS 14.0. Data analysis, including standard methods of descriptive and analytical statistics, calculation of mean values, standard deviations; standard errors, Student's criterion, Spearman's rank correlation criterion. Results and discussion. Atopic dermatitis is the most common allergopathology among young children. To assess the severity of atopic dermatitis, we used the SCORAD (Scoring of Atopic Dermatitis) index. The SCORAD scale is based on objective and subjective criteria. Objective symptoms are assessed on a 4-point scale: 0-none, 1-weak, 2-moderate, 3-severe.

The SCORAD index is calculated using the formula:

$$SCORAD = A/5 + 7B + C,$$

where A is the prevalence of skin lesions;

B is the sum of the intensity levels of clinical symptoms;

AD, C is the total sum of subjective impairment scores on a visual analogue scale.

The index values range from 0-no disease to 103-maximum severity.

AD is also characterized by its significant impact on patients' QOL. In conclusion, data from large population studies (using a general questionnaire to study QOL) indicate that statistically significant lower QOL parameters were identified in children with moderate to severe AD, compared with the corresponding QOL parameters in apparently healthy children.

A study of the parameters of QOL in young children based on the parent version of the questionnaire shows that the "overall score" of QOL is significantly lower.

At the same time, with a mild course of AD, the "overall score" of QOL was  $3.9 \pm 0.02$ , with a moderate course -  $3.5 \pm 0.04$ , and with a severe course -  $2.9 \pm 0.03$  ( $p < 0.05$ ).

In this case, with severe forms of atopic dermatitis, the parameters of quality of life "Neurological and mental development and physical health", "Family environment" and "Ability to be alone" are more susceptible to changes than others, in the case of a mild form of AD - "Ability to be alone", and with a moderate severity of the disease - "Neurological and mental development and physical health" (Table 1).

Table 1

Comparative characteristics of quality of life parameters in young children depending on the severity of AD (Parent version) (M ± m)

	Quality of life parameters	AD form			Control group
		Mild flow	Moderate Course	Severe Course	
1	"Behavior and communication"	4,5±0,08	3,7±0,03	3,5±0,03	4,1±0,07
2	"The ability to be alone"	3,0±0,03*	3,2±0,02	3,0±0,02*	3,5±0,03
3	"Family environment"	4,1±0,07	3,2±0,03	2,9±0,03*	4,2±0,07
4	Neuropsychic development and physical health"	4,0±0,07	3,1±0,02*	2,1±0,02*	4,3±0,07
5	Overall score	3,9±0,02	3,5±0,04	2,9±0,02*	4,0±0,07

In addition, it was found that the "Neurospecial development and physical health" quality of life parameter was low regardless of the severity of the disease.

In severe forms of atopic dermatitis, the "Neurospecial development and physical health", "Ability to be left alone" and "Family environment" quality of life parameters were low.

Table 2

Comparative characteristics of quality of life parameters in young children depending on the severity (Pediatric version) (M ± m)

	Quality of life parameters	Form AD			Control group
		Mild flow	Moderate Course	Severe Course	
1	"Behavior and communication"	3,9±0,03	3,5±0,03	3,0±0,03	4,1±0,07
2	"The ability to be alone"	3,1±0,04*	3,0±0,02*	2,9±0,02	3,5±0,04
3	"Family environment"	3,9±0,03	3,5±0,03	2,7±0,03*	4,2±0,07
4	Neuromyctal development and physical health"	3,7±0,03	3,3±0,02	2,0±0,02*	4,3±0,05
5	Overall score	3,6±0,02	3,3±0,04	2,6±0,02*	4,0±0,08

Summarizing the data, it should be noted that when assessing the relationship between QOL and the SCORAD index, an inverse moderate correlation was found for the parameters "Total score", "Behavior and communication" and "Neuromedical development and physical health" ( $r = -0.45$ ,  $p < 0.05$ ;  $r = -0.35$ ,  $p < 0.05$ ;  $r = -0.45$ ,  $p < 0.05$ ) for the parent version of the questionnaire, respectively, according to the results of the pediatric version, an inverse strong correlation was found for the QOL parameters "Ability to be alone" and "Behavior and communication" ( $r = -0.73$ ,  $p < 0.05$ ;  $r = -0.8$ ,  $p < 0.05$ ).

Conclusions. Thus, the international QUALIN questionnaire is a reliable tool for assessing the quality of life of young children with AD.

The most informative indicators of the QUAL of the QUALIN questionnaire are "Behavior and communication", "Neurological and mental development and physical health" parameters.

According to the results of the study, it is recommended to use the international QUALIN questionnaire to assess the QUAL of young children with atopic dermatitis

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