Psychopathology and Quality of Life for Adolescents With Asthma and Their Parents

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Asthma is known to have a direct impact on the quality of life of children with asthma and their families as a consequence of the attacks on day-to-day life. Psychopathological factors may be associated with poor quality of life by modulating the handicap and the patient's experience of it. The authors' objective was to evaluate the relationship between emotional and behavioral problems and quality of life, as assessed by the Pediatric Asthma Quality of Life Questionnaire and the Pediatric Asthma Caregiver's Quality of Life Questionnaire. The study group consisted of 100 adolescent outpatients with asthma who were undergoing regular checkups: 70 boys and 30 girls, ages 12 to 19. They were evaluated by means of self-administered questionnaires completed by their parents. Path analysis was used to propose a model of relationships between psychopathology and quality of life. The quality of life of the children with asthma and their parents was clearly associated with the presence or absence of psychological problems in the patients. Emotional problems were associated with the quality of life of both the patients and their parents; behavioral problems had a smaller effect on the quality of life of the parents only. The authors proposed a structural model of the quality of life of adolescents with asthma and their parents in which quality of life is dependent on psychological variables and is responsible for emotional problems. Multivariate analyses indicated that the quality of life of the children with asthma and their parents and the correlation between quality of life and psychopathology depended little on medical variables such as the duration of illness, its pretreatment severity, or hospitalizations in the past year. In contrast, the quality of life of the parents depended on that of the children and vice versa. This study showed that scores on the Pediatric Asthma Quality of Life Questionnaire and the Pediatric Asthma Caregiver's Quality of Life Questionnaire reflected not only the medical status of the patients but also psychological variables, which appeared to be a consequence of the functional handicap associated with asthma. Patients who assess the quality of their lives as poor would benefit from psychological evaluation and support.

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Quality of life can be defined as the satisfaction felt by an individual with the various areas of his or her life. Numerous tools have been developed to assess quality of life associated with various conditions, particularly chronic disease. Interest in the impact of illness on day-to-day func-

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tioning is leading investigators to include both disease-specific and generic health-related quality-of-life questionnaires in a broad range of clinical studies. Asthma, particularly in its severe forms, is known to affect the quality of life of affected children and their families. The frequency and severity of attacks, hospital admissions, secondary effects of treatments, absences from school, limitations of sport and other activities, fatigue, and problems sleeping directly affect quality of life.[1,2] With childhood illnesses, the family and particularly the primary caregiver may face a considerable burden. Quality of life of the patients and their families is increasingly considered a major medical outcome variable for medical diseases. The Pediatric Asthma Quality of Life Questionnaire[3] and the Pediatric Asthma Caregiver's Quality of Life Questionnaire,[4] by Juniper et al., are asthma-specific health-related quality-of-life questionnaires that are the most frequently employed instruments for asthma. The strength of these disease-specific quality-of-life instruments over generic instruments is that they focus on areas of function that are relevant to that particular condition, and as a result, they are most responsive to small but important changes. The scores on these scales are linked to the respiratory handicap and to nonpsychological factors, such as the medical control of asthma, spirometry, and the use of medication. However, quality of life may depend not only on the respiratory handicap but also on psychological factors.[5,6]

On the one hand, children having a bad quality of life because of severe asthma may have psychological problems.[7] On the other hand, psychological problems may influence quality of life and its assessment. Children and adolescents with asthma have been shown to be at a higher risk for problems in behavioral adjustment, with the greatest risk in the most severely ill group. Children and adolescents with persistent asthma have been shown to have a high prevalence of anxiety disorders and more anxiety, more behavioral problems, and lower self-esteem than healthy youths and nonasthmatic patients.[8–11] Children with psychological problems may have less well-controlled asthma, indirectly due to poor compliance or directly through psychophysiological pathways (a psychosomatic model).[1,12] Moreover, young patients with psychological problems are more vulnerable to the stress caused by asthma and are more likely to judge their quality of life to be poor; their parents are also more likely to be preoccupied by their asthma.[5] A correlation has been found between anxiety and depression and the reporting of asthma-related symptoms, independent of objective asthma-related variables, such as peak flow variability or response to methacholine.[13] Finally, the clinical severity of asthma should play a direct role in the objective assessment of quality of life, but behavioral and emotional problems may also affect its subjective estimation and ad hoc questionnaire scores.[5,7]

It is important to study relationships between quality of life and psychological problems. Disease-specific health-related quality-of-life instruments are most sensitive to variations in health status and to variations in functional handicaps associated with the disease. In contrast, they may be less sensitive to the psychological state of patients, whether from their own vulnerability associated with mental problems or from psychopathological difficulties arising from asthma. We believe that this is not the case and that assessments of quality of life by the Pediatric Asthma Quality of Life Questionnaire and the Pediatric Asthma Caregiver's Quality of Life Questionnaire are not independent of psychological factors. However, the correlation between quality of life and psychopathology may be an indication of the extent to which the impact of asthma rather than—in disagreement with the instrument's validation data—the subjectivity of the measurement of quality of life and the absence of a relationship between it and objective measures of the severity of asthma. We are unaware of any study of the relationships between scores on the Pediatric Asthma Quality of Life Questionnaire and the Pediatric Asthma Caregiver's Quality of Life Questionnaire and psychopathology or the orientation of this relationship, and indeed, these questionnaires are often used as objective indices for the functional impact of asthma.

Our hypothesis was that the assessment of quality of life of asthmatic children by the Pediatric Asthma Quality of Life Questionnaire and the Pediatric Asthma Caregiver's Quality of Life Questionnaire was linked to psychiatric symptoms and, in particular, anxiety in these young patients. Our aims were to determine whether

1. Scores on the Pediatric Asthma Quality of Life Questionnaire and the Pediatric Asthma Caregiver's Quality of Life Questionnaire were correlated with psychological problems, as measured by reference psychopathological scales.
2. Objective subscores (symptoms and activities) on the Pediatric Asthma Quality of Life Questionnaire and the Pediatric Asthma Caregiver's Quality of Life Questionnaire were not independent of more subjective subscores (emotional) on the Pediatric Asthma Quality of Life Questionnaire and the Pediatric Asthma Caregiver's Quality of Life Questionnaire.