Academic Achievement and the Self-Image of Adolescents with Diabetes Mellitus Type-1 and Rheumatoid Arthritis

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A total of 69 adolescents, 21 with diabetes mellitus type-1 (DM), 24 with rheumatoid arthritis (RA), and 24 controls matched for sex, age, social background, and living environment, were compared by means of their school grades and the Offer Self-Image Questionnaire. The ages of the children at the time of the diagnosis of the disease and its subsequent duration were the same in the DM and the RA groups. Results show that the academic achievement of adolescents with DM who are well balanced and adolescents with RA with mild or moderate symptoms are equal to those of their healthy peers. In the OSIQ scales there were no statistically significant differences between the groups. In the groups of controls, there were more significant correlations between the OSIQ scores and the school grades than those with the DM or RA adolescents. The direction was positive. The correlations of the 3 groups did not differ significantly from each other. In case of adolescents with various kinds of chronic diseases, it is important to support their motivation for learning and planning the future.

KEY WORDS: chronic disease; diabetes mellitus; rheumatoid arthritis; self-image; academic achievement.

INTRODUCTION

There are many studies of the relation between adolescents’ chronic illnesses, self-concept, and academic achievement. Academic achievement has shown to be a strong predictor of self-concept among children with chronic disease, such as a nephrotic syndrome, leukemia, and a congenital heart disease. A poor educational perfor-

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study was that, for most children, type-1 diabetes is not associated with a lower academic performance, compared with either siblings or classmates, although increased behavioral concerns are reported by parents. However, careful monitoring is still required to ensure that episodes of hypoglycemia associated with seizures do not adversely affect learning.

The transition of chronically ill (arthritis, etc.) adolescents into adulthood has received little attention. The severity of the illness, treatment compliance, and the psychological problems of the child may affect school attendance. There are indications that chronic arthritis is particularly disruptive, since pain, malaise, and physical restriction can be very marked and the potential for school disruption therefore high (Fowler et al., 1985; Sturge et al., 1997).

There are studies indicating that the majority of the children with a chronic illness have at least an average level of self-concept (Erkolahti et al., 2003; Hu et al., 1999). Aasland and Diseth (1999) have studied the self-concept of adolescents with chronic physical disorders using the Harter Self-Perception Profile for Adolescents. They found that the global self-worth of the adolescents with juvenile chronic arthritis and the adolescents with anorectal malformation was similar with the general Norwegian adolescent population. The juvenile chronic arthritis group had significantly better scores for self-worth, school competence, and social acceptance than the adolescents with anorectal anomalies.

Some specific studies are available concerning the self-image of the adolescents with a chronic illness, based on the Offer Self-Image Questionnaire. Adolescents with cancer seem to be well-adjusted, although they exhibit a less positive self-image in terms of their social and sexual self in comparison with control group (Stern et al., 1993). The self-image of the asthmatic children and adolescents is lower in comparison with that of healthy children (Brook and Tepper, 1996). According to the Offer Self-Image Questionnaire, female adolescents with cystic fibrosis are less well-adjusted than their healthy peers; however, this does not hold true for males (Sawyer et al., 1995). There are also 2 German studies concerning the self-image of adolescents with diabetes mellitus type-1. In the first, the chronically ill adolescents were assessed using a number of scales; they were then re-assessed in a follow-up study 4 years later. The self-concepts of the healthy and the diabetic adolescents proved to be very similar, as well as stable over time (Boeger et al., 1996; Boeger and Seiffge-Krenke, 1994). There are few studies available concerning the self-image of adolescents with rheumatoid arthritis. In a study in which a group of adolescents with diabetes mellitus type-1 and a group with rheumatoid arthritis were compared with healthy controls, the results indicate that the Body Image and the Vocational and Educational Goals were lower in the groups of chronically ill adolescents than in the control group; however, no statistically significant differences were found between the groups on the OSIQ scales (Erkolahti et al., 2003).

Several risk factors are associated with school difficulties in general adolescent population, including behavioral disorders, low self-esteem, and a disadvantaged home background (Reiff, 1998).

There are research findings from a nonclinical population indicating that autonomy support, scholastic competence, and self-worth predict academic performance (Wong et al., 2002). There is no research on the connection between school performance and the self-image among adolescents with diabetes mellitus type-1 and rheumatoid arthritis available.

In Finland, the National Health Care Insurance covers the costs of childhood diseases. There are no financial pressures for the families. Good care of the chronic diseases of the children and adolescents is available. For that reason, we expect that the possible failure in developmental tasks is influenced by the chronic disease and the problems it brings to the children and adolescents and their families.

The purpose of this study was to determine, whether there are any differences in the school achievement of adolescents with 2 different kinds of chronic illnesses—diabetes mellitus type-1 and rheumatoid arthritis—compared to healthy adolescents. Correlations between the school grades and the self-image scales in the groups of chronically ill adolescents compared to healthy adolescents were also assessed, and the difference of the correlations between the groups was tested. This project was approved by the Commission on Ethics of Turku University Hospital. All the participants gave their informed consent to participate in the study.

**Participants**

A total of 69 adolescents, 21 (9 boys and 12 girls) with diabetes mellitus type-1 (DM), 24 (11 boys and 13 girls) with rheumatoid arthritis (RA), and 24 controls (11 boys and 13 girls), were compared by means of their school grades and the Offer Self-Image Questionnaire. The groups were matched for sex, age, social background, and living environment. The demographic characteristics of the sample are seen in Table I. The DM and the RA patients were identified from the hospital files of the Turku