Changes in Psychiatric Problems and Service Use Among 8-Year-Old Children: A 16-Year Population-Based Time-Trend Study

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ABSTRACT

Objective: To study differences in children's psychiatric symptoms and child mental health service use at three time points: 1989, 1999, and 2005. **Method:** Three cross-sectional representative samples of 8-year-old children were compared from southern Finland. The sampling, procedure, and methods were similar at all three time points. Information was gathered from parents and teachers using Rutter questionnaires and other related determinants of service use and from children using the Children's Depression Inventory. The participation rate at the three time points was 96% in 1989, 86% in 1999, and 84% in 2005. **Results:** Overall, parent and teacher reports of children's problems did not show a significant increase during the 16-year period. Parent reports of boys' conduct symptoms decreased from 1989 to 1999. However, self-reported depressive symptoms among girls increased from 1989 to 2005. Low parental education level, broken family, and negative life events were associated with depressive symptoms among girls. Although 4% of boys and 1% of girls had used child mental health services in 1989, the respective figures in 2005 were 12% and 4%. The majority of children who were screen positive on either parent or teacher ratings of emotional and behavioral problems using Rutter scales had received some educational support from school in 2005. **Conclusions:** Reports of depressive symptoms increased among girls, and this finding merits further studies. Use of services has continuously increased. School services play an important role in providing support and early detection of children who need to be referred to child mental health services. *J. Am. Acad. Child Adolesc. Psychiatry*, 2008;47(3):317–327. **Key Words:** mental health, depression, service use, time trend.

Although official statistics and referral data give rather reliable information about trends in the most severe psychiatric problems (e.g., suicides), in the case of more common psychiatric problems, registry data on admissions to services are not reliable, given that only a proportion of children access services. Ideally, to obtain reliable information about time trends, a wide range of indicators for psychiatric problems and use and need of services should be measured repeatedly with directly comparable measures and sampling designs including information from multiple sources (e.g., parents, teachers, children). Most time-trend studies include only adolescents, and there is a lack of studies on changes in young children's psychiatric symptoms.[1] Furthermore, findings from different studies on changes in different types of childhood psychiatric problems vary.

First, concern about an "epidemic" of child and adolescent depression has found expression in academic journals.[2–4] Furthermore, there is evidence of increased numbers of prescriptions for antidepressants for children and adolescents.[5] However, trends in medication use do not necessarily reflect changes in psychiatric problems.

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A recent meta-analysis by Costello et al.[6] suggested no evidence of an increased prevalence of child or adolescent depression during the past 30 years.

Second, user surveys and reports from physicians show a substantial increase in the diagnosis of attention-deficit/hyperactivity disorder (ADHD) in primary settings since the late 1980s, for example, in the United States.[7,8] In Finland, there has been a 16-fold increase in the use of psychostimulants from 1999 to 2005, from being almost nonexistent in the 1990s,[9] a pattern found in many other countries. However, community surveys suggest few changes in ADHD-related problems.[1,10–12]

Third, most time-trend studies of conduct problems and antisocial personality problems are related to adolescents. Some studies show an increase in adolescent conduct problems.[1,11] However, in the United States, questionnaire-based data point to a rise in levels of adolescent externalizing problems between the late 1970s and the 1980s, followed by a decrease by the late 1990s.[13] The time-trend studies of young children using a dimensional approach to measure conduct-related problems suggest little recent systematic change in these problems.[1]

Finally, we lack information about time trends of children's need and use of mental health services. In our previous 10-year time-trend study, the overall rate of child mental health service use increased twofold from 1989 to 1999,[12] whereas Achenbach et al.[10] reported no change in rates of child mental health service use during the same 10-year period, either for the entire U.S. national sample or for children with deviant Child Behavior Checklist total problem scores.

To investigate changes in the 8-year-old children's emotional and behavioral problems and the use and need of mental health services, we compared general population samples from three different time periods, 1989, 1999, and 2005. No previous population-based time-trend study on young children exists using three informants (parents, teachers, and children) and similar methodology and sampling procedures at repeated time points. Previous population-based time-trend studies including young children obtained data only from parents[10] or investigated only a 10-year period comparing changes between only two time points.[12,14,15] On the basis of our previous 10-year time-trend study, our hypothesis was that service use and depressive symptoms show a systematic change over the three assessments during the 16-year study period. Our further aim was to provide some possible explanations for such changes.

METHOD

Subjects

As reported previously,[12,15] the target population was Finnish-speaking children born in 1981 and living in one of the five university hospital catchment areas of Finland (Turku University Hospital, southwest Finland). A sample of 13% of the age cohort (n = 1,038 children) was drawn by selecting a representative sample of communities according to their degree of urbanization: urban, suburban, and rural. A child registered in the selected school district or community belonged to the sample even if he or she went to school outside the district because of a need of or desire for special education.[12,15]

In 1999 and 2005, a sample corresponding to that of 1989 was selected. All of the children born in 1991 and 1997 in the same municipalities and school districts that belonged to the 1989 sample were included in the sample (1,035 children in 1999 and 1,030 children in 2005). In 1999, three teachers were not willing to participate in the study (73 children), whereas in 1989 and 2005, all of the teachers participated. Figure 1 shows the sampling of the study cohorts in 1989, 1999, and 2005.

The participation rates were 96% in 1989, 86% in 1999, and 84% in 2004 (Fig. 1). The proportion of girls at all time points was 50% to 52%. In 1999, due to a technical error, identification codes and information about sex on 180 children's questionnaires (Child Depression Inventory) were lost. Thus, the data from 180 children's questionnaires could not be linked to parent or teacher questionnaire data.

The procedure was similar at the three time points. Data collection was organized through teachers. The teacher sent a questionnaire via the child to the parents, and the parents completed it and returned it in a sealed envelope to the teacher. The child completed a questionnaire in the classroom. In the 1999 and 2005 samples (but not in the 1989 sample), the parents' written consent was required for their child to participate in the study, and only after this was given did child and teacher complete the questionnaire. The distribution of questionnaires was started in November 1989, in November 1999, and in November 2005. The study was approved by the school authorities and by the ethics committee of Turku University Hospital.

Measures

The wording of the questionnaires in 1989, 1999, and 2005 were identical.

Parent and Family Variables. The parent questionnaire, at all time points, included questions on family structure and education of parents. Education of parents was divided into two categories: 12-year upper secondary education or less (in Finland compulsory education consists of 9-year comprehensive school, after which one can continue education in vocational school or in upper secondary school concentrating on theoretical subjects).

Service Use. Information about perceived need and use of professional help for the child's emotional or behavioral problems was obtained from the parents of 8-year-old children using the following question: Have you considered seeking or have sought help or treatment for your child's emotional or behavioral problems? (scale: 1 = no, 2 = have considered it, 3 = have sought help). A similar question about the child's need for referral to services was included in the teacher questionnaire. Information about service need and use was pooled to generate three groups: children who had no need or