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ADHD and other associated developmental problems in children with mild mental retardation. The use of the “Five-To-Fifteen” questionnaire in a population-based sample

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ABSTRACT

The aim was to examine the rates and types of parent reported neuropsychiatric problems in children and adolescents with mild mental retardation (MMR) (mild intellectual disability/UK) using the Five-To-Fifteen questionnaire (FTF). The target group comprised all pupils with clinically diagnosed MMR, aged between 7 and 15 years, attending the special schools for children with MMR in two municipalities in a region in the South-West of Sweden. The FTF is a 181-item parent questionnaire with age and gender specific Swedish norms covering eight domains, including the phenomenology of early symptomatic syndromes eliciting neurodevelopmental examinations (ESSENCE), including ADHD, autism, tic syndromes, and various kinds of language, memory, and learning problems. Parents of 63% (39/62) of the eligible target group completed the FTF. After scrutiny of the medical records, 6 of the 39 children were found not to meet criteria for MR. Scores exceeding the 90th centile of the norm group were considered indicative of neuropsychiatric problems. Such high scores are strongly associated with clinically valid ESSENCE/neuropsychiatric disorders. All the examined children with validated MR were reported by their parents to have learning problems. There were very high rates of problems reported in all the other seven FTF domains: perception (88%), language (79%), social skills/autism (76%), memory (67%), emotional problems (58%), motor skills (55%) and executive functions/ADHD (55%). School age children with MMR are all in need of a comprehensive work-up covering not only general cognitive abilities, but also many other areas, including motor skills, executive function/attention, social and emotional/behavioural symptoms/functioning. Such broad assessment (including child screening by parent report with the FTF) will enable a better basis for understanding their special needs of support through life.

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1. Introduction

A high frequency of associated neurodevelopmental/neuropsychiatric disorders or so-called comorbidities has been identified in autism spectrum disorders (ASD) and attention-deficit/hyperactivity disorder (ADHD) (Gillberg, 2010; Gillberg et al., 2004; Germanò, Gagliano, & Curatolo, 2010; Simonoff et al., 2008). Mild mental retardation (MMR) (UK: mild

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intellectual disability) has attracted much less attention compared to ASD and ADHD in this respect. However, in the 1980s, Gillberg and collaborators studied a representative group of 91 children with MMR and reported that more than half of them had psychiatric disorders; including autism, emotional disorder, conduct disorder and ADHD (Gillberg, Persson, Grufman, & Themner, 1986). Di Nuovo and Buono (2007) studied co-occurring disorders in a group of 184 individuals with mental retardation, IQ range 55–63. They emphasized the importance of addressing disorders of attention, mood and anxiety as these mental health conditions impact on social functioning and well being. The significantly increased risk of certain forms of psychiatric disorder of children and adolescents with intellectual disability, all degrees, not specifically mild mental retardation, was also reported from a UK study (Emerson, 2003). Simonoff and collaborators (2007) studied emotional and behavioural problems, including ADHD symptoms, using the SDQ (Strengths and Difficulties Questionnaire) (Goodman, 1997) in a representative sample of 12–15-year-old children of different intellectual levels. They demonstrated that symptoms of ADHD were at a high rate in children with intellectual disability and that the presences of ADHD symptoms were linearly related to lower IQ.

In Sweden, most children with MMR are identified at school age and the diagnostic process often starts and for some children ends at school. There are certain difficulties with ascertaining a diagnosis of MMR – especially in children at the borderline intellectual functioning level. In addition to a tested IQ in the 50–69 range, the diagnosis of MMR includes an adaptive criterion (DSM-IV; ICD-10), and the possibility of associated dysfunctions should be taken into consideration.

In 2004, a comprehensive parent screening tool for ADHD and associated comorbidities was developed in the Nordic countries, the “Five-To-Fifteen” questionnaire (FTF) (Kadesjö et al., 2004). The instrument has been normed for Swedish children aged 5–15 years, and there are age and gender norms for various age bands, including three bands for the 7–15-year-old-age-range.

2. Aim

In our opinion, MMR has not received sufficient attention in terms of evaluating associated dysfunctions and the aim of the present study therefore was to explore diagnostic concerns and associated developmental disorders/problems – with a focus on ADHD – in a population based group of school children with MMR in Sweden using the FTF.

3. Materials and methods

3.1. Study area and population

The study area comprised two representative municipalities in the south western part of Sweden with 37,989 and 18,455 inhabitants, respectively and with a total of 5671 children, born in 1994–2002, and residing in these municipalities on December 31, 2009.

3.2. Subjects and methods

Children and adolescents with MMR and with education in the schools for pupils with MMR were identified through files at the school health units in the two municipalities. In principle, only children with a diagnosis of MMR (IQ 50–69 plus problems in everyday adaptive functioning stemming from the low IQ) or autism were considered for inclusion in such schools.

A letter containing an outline of the study and with an invitation to participate was sent to all parents/carers of the 53 children with MMR born in 1994–2002 and living in either of the two municipalities. To increase the sample size 9 pupils born in 1993, younger than age 16 years, were also included. Of the collapsed total of 62 eligible pupils, 39 had parents (63%) who participated in the study by completing the FTF questionnaire and by allowing the child’s health care record at school to be included for review. Of these 39 pupils, 6 did not to actually meet criteria for MMR with respect to the IQ and adaptive criteria (see below). Thus, the study group comprised 33 individuals (21 boys and 12 girls) with a mean age of 12 yrs (6–15 yrs).

The parents were asked to complete the FTF questionnaire (Korkman et al., 2004) covering different aspects of the child’s functioning in daily life, see below. Parents were also asked if they agreed to let their child’s teacher fill out the Adaptive Behavior Assessment System-II (ABAS-II) (Pearson, 2008), i.e., a questionnaire pertaining to children’s abilities in social functioning, communication and daily life skills.

A review of the school health records was performed by two of the authors (IL and EF) in terms of cognitive test results/reports and medical data to evaluate the accuracy of the diagnosis according to IQ test data and the assessment of the child’s adaptive functioning, according to ABAS, filled out by the child’s teacher. The validity of the diagnosis MMR was established for all included pupils.

3.3. The FTF

The FTF is now widely used, clinically and in research, in the Nordic countries. It was developed by a Scandinavian and Finnish group to serve as a tool for screening of neurodevelopmental-neuropsychiatric disorders or problems in the

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