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<th>Screening for autistic spectrum disorder at the 18-month developmental assessment: a population-based study</th>
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Introduction

Autism is a difficult to detect in very young children on clinical assessment or using standard diagnostic instruments. The average earliest age of diagnosis is approximately four or five years, although there is a trend towards earlier diagnosis in the pre-school age range. Even with relatively earlier diagnosis, there is usually a gap (typically between 24 and 36 months duration) between the child's age when the parents first raise concerns, and the child's age at clinical assessment. Delays in diagnosis disrupt the child and parents' lives, and delay the implementation of support services. Evidence suggests early diagnosis and intervention greatly enhance long-term prognosis.

Given the importance of early diagnosis, a screening instrument that can be easily administered to large samples of very young children would help identify those at-risk for autism. The Checklist for Autism in Toddlers (CHAT) addresses the need for an early screening instrument. It is a structured interview conducted by a trained clinician to administer to infants at 18 months of age. Primary healthcare providers can administer the CHAT. Therefore it can be used in settings where there is a need for earlier screening and diagnosis of autism. The CHAT was first administered as part of the 18-month developmental assessment in the UK and has been shown to identify potential cases of autistic spectrum disorder for full diagnostic assessment. The CHAT instrument has not been widely used in this age group in Ireland to date. We report findings from a population based screening study using the CHAT instrument in a sample of 2117 infants presenting to public health nurses for 18-month developmental assessment.

Methods

Sample Group

We used a cross-sectional study design. All Public Health Nurses (PHNs) who worked in counties Cork and Kerry during the target period were invited to act as data collectors. An open letter was sent to all PHNs inviting them to attend one of seven half-day training sessions offered at various locations in counties Cork and Kerry by members of the research team. The participants were calibrated in the administration and scoring of the CHAT instrument, given a presentation on childhood autism, and the study protocol was thoroughly discussed. A total of 164 PHNs attended a training session and 95% agreed to assist with data collection (n=156).

Figure 1: Social class distribution of the study sample relative to the Southern Health Board Catchment area

The participating PHNs invited 2,884 parents and their infants to participate in the study. A total of 7% of those approached refused to participate (n=201). Of those approached, 49% were female (n=1029). The social class distribution of the sample group (n=1781 with available data) was broadly representative of the socio-economic profile of the Southern Health Board area (Cork & Kerry) based on 2002 Census data, allowing for sampling variation (Figure 1).

CHAT Instrument and Field work

The CHAT instrument was employed in data collection. This is a 14 item interviewer-administered instrument divided into two sections: A and B. Each completed CHAT was scored by the PHN into one of three categories: high, medium or low risk for autism, based on a scoring system developed by the original authors of the instrument. The PHNs were trained in the use of the CHAT instrument, given a presentation on childhood autism, and the study protocol was thoroughly discussed. Each completed CHAT was scored by the PHN for each of the three categories: high, medium or low risk for autism, based on a scoring system developed by the original authors of the instrument. The CHAT instrument has not been widely used in this age group in Ireland to date. We report findings from a population based screening study using the CHAT instrument in a sample of 2117 infants presenting to public health nurses for 18-month developmental assessment.

A summary of screening outcomes at the first screening, second screening and the outcome of clinical assessment is provided in Figure 2. A total of 29 infants from the study sample of 2117 were characterised as screen positive for autism and were offered full diagnostic assessments by an experienced clinical psychologist (n=15). Of the 15 parents invited to participate in this study, a total of 14 (93%) agreed to participate (n=13). No information was obtained on one of the ten infants who were eligible, but did not participate in the study.

Results

A summary of screening outcomes at the first screening, second screening and the outcome of clinical assessment is provided in Figure 2. A total of 29 infants from the study sample of 2117 were characterised as screen positive for autism and were offered full diagnostic assessments by an experienced clinical psychologist (n=15). Of the 15 parents invited to participate in this study, a total of 14 (93%) agreed to participate (n=13). No information was obtained on one of the ten infants who were eligible, but did not participate in the study.

Discussion

This study represents the first assessment of the feasibility of routine administration of the CHAT instrument as a screening tool for autism in an Irish sample of children aged between 18 and 20 months, attending for routine developmental assessment. The findings suggest that use of the CHAT questionnaire is feasible in this setting and that a significant number of autism cases can be detected.

The involvement of public health nurses in routine clinical practice, but with formal training in the use of the CHAT instrument, represents a potentially feasible strategy for the early diagnosis of autism. It is an inexpensive, quick
and simple instrument for PHNs to use. Given the evidence that early diagnosis improves prognosis in autism\(^\text{19}\) there is a clear need for further work addressing the use of the CHAT instrument in routine developmental assessment in Ireland.

References


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Other References: No References

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