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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 difficult to detect in very young children on clinical assessment or using standard diagnostic instruments.

The average earliest age of diagnosis is typically 3-5 years. 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 present 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 early screening and represents a significant step forward in the design of instruments to be administered to infants at 18 months of age. Primary health care providers can administer the CHAT. Therefore, it can be used in the course of routine health assessments. The CHAT has been used in other countries such as the UK in an 18-month developmental assessment in the UK. It has also 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, and 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 (2002) were invited to participate in the study. The socio-demographic questionnaire was self-completed by the parent. The total number of PHNs approached agreed to participate (n=164). A total of 156 PHNs attended a training session and 95% agreed to assist with data collection (n=156).

The CHAT instrument was employed in data collection. This is a 14 item interviewer-administered instrument divided into two sections: Section A includes 9 items administered to the parent and Section B includes 5 items based on interviewer observations of the infant. The PHNs collected additional socio-demographic data including data on parents' occupation(s), children's birth order and children's birth status (single or twin).

Participating PHNs administered the CHAT at the 18-month developmental check. The socio-demographic questionnaire was self-completed by the parent. The socio-demographic data was coded into social class categories using the methodology employed in the 2002 Irish Central Statistics Office social class categorisation. The infants' social class category was coded on the basis of the higher of the parents' social class categories.

Each completed CHAT was scored by the PHN into one of three categories: high, medium or low risk for autism, based on a standard scoring system. If an infant scored medium or high risk for autism at the first administration, a second screening was administered approximately one month later. All second screenings were administered by the same PHN that completed the first CHAT assessment. Each completed CHAT was scored by the PHN into one of three categories: high, medium or low risk for autism, based on a standard scoring system. If an infant scored medium or high risk for autism at the first administration, a second screening was administered approximately one month later. All second screenings were administered by the same PHN that completed the first CHAT assessment. Each completed CHAT was scored by the PHN into one of three categories: high, medium or low risk for autism, based on a standard scoring system. If an infant scored medium or high risk for autism at the first administration, a second screening was administered approximately one month later. All second screenings were administered by the same PHN that completed the first CHAT 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 "Medium" or "High" risk for autism at the first administration of the CHAT. Each completed CHAT was scored by the PHN into one of three categories: high, medium or low risk for autism, based on a standard scoring system. If an infant scored medium or high risk for autism at the first administration, a second screening was administered approximately one month later. All second screenings were administered by the same PHN that completed the first CHAT assessment.

Discussion

This study represents the first assessment of the feasibility of routine administration of the CHAT instrument as a screening tool for autism in a sample of infants between 18 and 36 months of age. The CHAT instrument was employed in data collection. This is a 14 item interviewer-administered instrument divided into two sections: Section A includes 9 items administered to the parent and Section B includes 5 items based on interviewer observations of the infant. The PHNs collected additional socio-demographic data including data on parents' occupation(s), children's birth order and children's birth status (single or twin).

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The involvement of public health nurses in routine clinical practice, but with formal training in the use of the CHAT instrument, represents a significant strength of the study. However the relatively small sample size is a significant limitation. The average earliest age of diagnosis is approximately 3-5 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 present concerns, and the child's age at clinical assessment.

The study findings suggest that use of the CHAT questionnaire is feasible in this setting and that a significant number of autism cases can be detected.

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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) represents a potentially feasible strategy for the early diagnosis of autism. It is an inexpensive, quick

In summary, we have shown that the CHAT instrument, administered by public health nurses at the 18-month developmental assessment, represents a potentially feasible strategy for the early diagnosis of autism. It is an inexpensive, quick

An important finding from this study is that a significant number of autistic spectrum cases can be detected at 18 months of age by routine screening using the CHAT instrument. This is consistent with previous studies suggesting that an early diagnosis of autism greatly enhances long-term prognosis. However, the relatively small sample size is a significant limitation, and the prevalence estimate may not be representative of the general population. Further research is needed to confirm these findings and evaluate the effectiveness of early intervention strategies.
and simple instrument for PHNs to use. Given the evidence that early diagnosis improves prognosis in autism\(^2\) 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