

Identification of Early Signs of Autism in First Year of Life

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Introduction

The study examined the presence of early indicators of autism in the first year of life of 110 babies originating from different cultures, who were later diagnosed with autism.

Methods

Participants

The study, which was conducted from 1997 until 2007, examined 84 (76.4%) boys and 26 (23.6%) girls, who were later diagnosed with autism at the age of 2-3 years.

Procedure

Video-recordings of the first 15 months of the participants' lives (taken before developmental disorder was suspected) were analyzed retrospectively by trained professionals. Variables associated with autistic characteristics were measured according to validated parameters of duration and frequency.

Findings

The study's findings indicated that 89% of the studied infants exhibited indicators associated with autism during the first 15 months of life.

Objectives

Variables Investigated:

Lack of Eye Contact - during: closeness, feeding, play, averting gaze (Mauer 1976; Morton & Johnson, 1999).

Lack of Reaction to Voice / presence - no smile or babbling, no attempt to divert attention, no reaction to parents' departure (Landa & Freil, 2006).

Excessive Passivity - lack of: crying, movement, interest in the surroundings, tracking people with their gaze, (Greenman, 2005).

Delayed Motor Development - inappropriate attainment of milestones, hypotonia, hypertonia (Titchanan, et al., 1998).

Excessive Activity - restless movement, persistent crying, obsessive occupation with an object, lack of self-regulation (Swanson, 2005).

Refusal to Feed/Eat - breast feeding, fruits/vegetables, solid foods. Fixation on certain foods (Blug, 1987; Alonim, 1999, 2010; Ailon, 2010).

Head Circumference - accelerated growth during first year (Shannon, 2003; Courchesne, 2003, 2003).

Aversion to Touch - contraction, recoil, dissatisfaction while being held, cuddled or kissed, lack of sensory modulation (Dunn & Rickman, 1995).

Diagram 1: Symptoms' analyses



(All the graphs / table / diagrams / relate to n = 110)

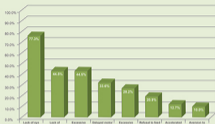
Table 1: Co-existence of two variables

Delayed motor development	Aversion to touch	Refusal to feed	Lack of reaction to voice or presence	Lack of eye contact	Excessive activity	Excessive passivity	
					21.8%	16.4%	Excessive activity
				37.3%	7.3%	29.1%	Lack of eye contact
		11.8%	14.5%		2.7%	8.2%	Lack of reaction to voice or presence
							Refusal to feed
	3.6%	8.4%	7.3%	8.8%	2.7%		Aversion to touch
	1.8%	18.0%	16.4%	26.4%	8.9%	20.0%	Delayed motor development
7.3%	1.8%	2.7%	4.8%	11.8%	2.7%	7.3%	Accelerated growth of head circumference

Conclusions

These findings affirm the assumption that indicators for autism frequently appear in the first year of life, indicating that it is possible to conduct screening and detect autism in the early stages of infancy, significantly earlier than diagnosis is usually available.

Graph1: Symptoms' findings



Secondary Findings

Diagram 2: Parents' observation data

- Parents had suspected unusual signs
- Extended family noticed but did not tell the parents
- Family members suggested testing the baby, but were ignored
- Parents/family had not noticed any unusual signs



Clinical Implications

The study led to construction of a screening scale to identify indices associated with autistic characteristics in the first year of life - the Early Signs of Pre-Autism Screening Scale for Infants ESPASI (Alonim, et al., 2007). The scale is used in Medical Centers in Israel.