Neuropsychology Abstracts

Title: EARLY INFORMATION PROCESSING: THE DEVELOPMENT OF ATTENTION AMONG INFANTS WITH SPINA BIFIDA

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Background: Many children with spina bifida meningomyelocele have been found to have greater impairments on the focus-execute dimension of attention, especially relative to dimensions involving the ability to sustain and shift attention. These difficulties are often present from birth and have important implications for infants' early spatial learning and rule-based learning. This study focuses on the development of early visual information processing among infants with Spina Bifida (SB) compared to typically developing infants using the habituation-dishabituation paradigm.

Method: Analyses were conducted in two stages. First 87 infants were evaluated to determine if 18 month old infants (SB = 47; Control =40) differed in their ability to shift attention and habituate to two female faces, as well as their responses to composite and novel stimuli. Second, relations between these variables and infant motor and mental functioning were evaluated.

Results: The results of the study indicated that difficulties with visual attention skills can be detected as early as 18 months-of-age among infants with SB. Infants with SB differed significantly from controls on attention getting. Although there were no differences found on habituation and composite tasks, infants with SB differed significantly from controls on their ability to dishabituate.

Conclusion: Based on these findings, the current study leads to two important conclusions. The first is that attention difficulties observed among children with SB by school age can be documented and monitored early in infancy. There are important parallels between the infant habituation paradigms and covert attention paradigms used with older children that indicate continuity in development, especially for attention processes involving stimulus control. Second, these findings suggest that sensory motor differences found among children with SB may have a varied impact on visual attention.