



INDIVIDUAL PRESENTATION PROPOSAL

2013 APA Annual Convention

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Hypersensitivity to Touch Predicts Social Dysfunction in People with Autism

Social disability is the central defining feature of autism, yet mechanisms that might account for this disability remains poorly understood. Communication deficits and deviant behaviors that are common among people with autism contribute to impair social functioning. Despite strong support for cognitive explanations, such as Theory of Mind deficits, the fact remains that social dysfunction in autism is typically present prior to the time at which the earliest precursors of a Theory of Mind emerge. This implies that more primitive/fundamental processes may govern social dysfunction in people with autism. In general, research tends to focus on visual and auditory channels as routes for social information. However, recent evidence for considering touch as a channel for social information has been presented. Atypical sensory processing is common among people with autism. Therefore, it can be hypothesized that hypersensitivity to stimuli may serve as an operating factor influencing social dysfunction in people with autism. The aim of this paper is to investigate this hypothesis using a Structural Equation Modeling approach.

The study group consisted of all people older than 18 years of age (n=915) with administratively defined ID living in the county of Örebro, Sweden. The data collection took place at sheltered accommodation homes and adult activity centers. The data were collected on behalf of all residents living in these homes or registered at the daycare centers. A staff member judged to be in a good position to provide information about the participant was allocated as informant to each participant.

Because the measurement variables were ordinal, the parameters were estimated by the WLS method using the asymptotic covariance matrix of the polychoric correlations and subsequently analysed using the LISREL program. The following variables were used in testing the hypothesis: The independent endogenous variable was autism and the dependent variables representing social dysfunction were 'function in groups' and 'initiate interactions'. Independent mediating variables were communication deficits (one variable), hypersensitivity (six variables: light, sound, touch, smell, taste, and movement), and behavior problems (three variables: self-injurious behavior, stereotyped behavior and aggressive/destructive behavior).

The initial analysis showed that presence of autism was significantly related to increased social dysfunction (lower group functioning and less prone to initiate social interactions). Given this result, the communication ability, hypersensitivity and behavior problem variables were entered as mediating factors into the model. Subsequent deletion of all non-significant paths resulted in a well fitted model (S-B Chi-square=16.11, df=7, $p<0.02$, CFI=0.99, RMSEA=0.038), demonstrating that autism was related to social dysfunction via three mediating factors: communication deficits, hypersensitivity to touch and aggressive/destructive behaviors. It should be noted that no direct paths from autism to social dysfunction variables were significant.

In conclusion, social dysfunction among people with autism is primary mediated by hypersensitivity to touch in addition to communication deficits and aggressive/destructive behaviors. The results demonstrate that the cutaneous sense is an important channel for social information and it endorses the initiative to reintroduce sensitivity to sensory stimuli for Autism Spectrum Disorders in the DSM-5.