Title: That's What I Like: The Use of Circumscribed Interests within Interventions for Individuals with Autism Spectrum Disorder. A Systematic Review

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Introduction: Circumscribed interests (CI) are a subcategory of restricted and repetitive behaviors that occur commonly in individuals with autism spectrum disorder (ASD). CI are characterized by an intense and focused interest in a narrow range of subjects. Compared to hobbies and interests in typical development, CI in ASD have been found to have a profound effect on learning and adaptive behavior (Varni et al., 1979) as well as socialization opportunities (Boyd et al., 2007). Parents frequently rate CI in ASD as intense and as more likely to interfere with everyday activities (Cascio et al., 2014, Klin et al., 2007, Turner-Brown et al., 2011). However, there are also some potential benefits associated with CI. For example, they may represent islands of ability for individuals and as well as source of great pleasure (Mercier et al., 2000). It is reasonable to assume that individuals would naturally be more motivated to engage and participate in interventions that incorporate CI and high interest items. The purpose of this systematic review was to determine how CI have been incorporated within interventions for individuals with ASD across the lifespan and how effective the interventions are.

Method: The methods used within this review were consistent with those recommended by the Cochrane and Campbell Collaborations. Inclusion criteria were based on three predetermined categories: (1) Study Population; (2) Intervention Design; and (3) Outcome Variables. Data were extracted and coded based on the three predetermined categories: (1) Study sample and research design; (2) Intervention design; and (3) Outcome variables and results.

Results: We located 21,649 records following a thorough search of databases. Two hundred and forty-nine full-text articles were assessed for eligibility, of which 30 studies were eligible for data extraction. The majority of studies were single subject designs (k = 27) and focused on toddlers/preschool (k = 13) or school-aged children (k = 17). Common interests utilized were TV Shows or Movies (N = 20), Popular Characters (N = 17), computers/video games (N = 12) and transportation. The majority of interventions were implemented by trained researchers (k = 13) and reported social outcomes (k = 22) including play with peers, conversation skills, social activities and joint attention. Five studies reported on task behaviors, such as direction following and completion of assigned tasks. All studies reported positive findings on at least one outcome variable, however maintenance of these effects (when reported) was infrequently observed.

Discussion: Results from the 30 studies included in this systematic review suggest that the inclusion of CI within interventions can lead to positive effects across a number of domains. More group designs are required in order to conduct an actual meta-analysis and understand the magnitude of treatment effects. Despite the relevance, only a handful of studies (n = 6) examined the benefits of CI-based social groups and activities for adolescents and adults. Given this population remains understudied, coupled with the increasing numbers of individuals with ASD in this age range, this could be an area of great promise, especially examining ways in which to promote improved quality of life as individuals enter adulthood and beyond. Future research ideas include examining the effects of these personalized interventions using methods such as eye tracking and EEG.

References/Citations: