

The Impact of Autism on Families: Topography and Function of Repetitive Behavior

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Project Purpose

The study will analyze functional behavior in families with more than one child with autism (e.g., multiplex families) and in families with one child with autism (simplex families). It will also separate functional behavior assessments (FBA) results by gender, since more children with autism are males, and by occurrence in families. These analyses have not been done. Our goal is to find these differences and to assess them.

Project Importance

The prevalence of autism has received considerable media attention in recent years. The Centers for Disease Control and Prevention recently assessed the prevalence of autism in children and determined that one in 88 children have autism. Such shocking numbers leave us wondering what the reasons may be for increases in prevalence. There is considerable attention being paid to genetic causation, but there is only partial clarity on the genetic relationship to this disorder which is diagnosed purely on behavioral characteristics.

In terms of assessment and treatment of repetitive behaviors associated with autism spectrum disorder, behavioral interventions based on principles of applied behavior analysis (ABA) are generally accepted as the most effective among this population.¹ FBA is a practice based on ABA that includes an identification of the environmental conditions that motivate and prompt problem behaviors. In special education, FBA is required by law under some circumstances, including cases of severe problem behaviors that pose a danger to a child or people in his/her environment. Primary variables assessed in a FBA include attention from adults or peers, escape and avoidance of task demands and social interactions, access to tangible items, and self-stimulatory behaviors (i.e., repetitive behaviors). These variables have been studied extensively in experimental studies.² The experimental form of FBA, functional analysis, is an approach to assessment that directly applies positive reinforcement and other contingencies to the problem behaviors at hand.

A current line of research deals with gene-environment interactions in developmental disabilities. In this line of research, functional assessments are conducted on the problem behaviors of children with intellectual disabilities. The behaviors typical for a specific syndrome (e.g., Fragile X, Williams, Prader-Willi, etc.) are considered in these analyses. Research has shown some differences between the various intellectual disability syndromes in terms of function of problem behavior, and syndrome-specific behaviors have been identified.³ Although the genetics of autism are not fully understood, several studies have analyzed the behavior of children with autism using functional assessment. Children with autism seem to engage in behaviors frequently to obtain either attention⁴ or escape⁵, suggesting that problem behaviors are strongly related to children's inability to access these critical variables through appropriate social behaviors.

Project Profile Body

After signing the consent forms, parents will complete the following questionnaires and interviews. Following the study, parents will be provided with a report that could be useful for schools or other clinical practitioners.

1. **Demographics Interview.** The purpose is to briefly interview the parent to identify which group the child(ren) fall into and to get a brief history and description of the problem. Questions identify the family biological arrangement. In particular, parentage, siblings, and family history of autism and related developmental disorders.
2. **Repetitive Behavior Questionnaire (RBQ).** RBQ has 33 questions aimed for finding the repetitive behaviors that are most marked in the child(ren) with autism. The RBQ has been validated in a recent study.⁶ RBQ will be completed on all children in the family regardless of diagnostic status.
3. **Questions about Behavioral Function (QABF).** QABF is a validated functional assessment checklist/rating scale that aims to identify the function of the repetitive behavior. Whether it caused by attention, escape, non-social, physical, and accessing tangible items.

4. Evidence of Autism Diagnosis. Parents will be asked to provide evidence of an autism diagnosis. In particular, the date, name of clinician, assessment(s) used, and school service pattern will be addressed.

After completing the previous items we will conduct an analysis of the differences between the topography of repetitive behaviors of children with autism in simplex and multiplex families. Then we will then look at the differences between the function of repetitive behaviors of children with autism in simplex and multiplex families. A chi square analysis will be used to analyze the differences between the repetitive behavior topography and function between gender and autism occurrence in families.

Anticipated Academic Outcome

I presented a poster of a preview of our study for the David O. McKay annual Mentored Research Conference in April 2013 and will present our findings in the 2014 conference. We will analyze our findings and publish the results in a journal for autism. We anticipate many studies to result from our findings.

Qualifications

Blake Hansen is a faculty member in the Department of Counseling Psychology and Special Education at Brigham Young University. He holds a PhD in Behavioral Psychology from the University of Kansas. He has over 7 years experience in working with children with disabilities, including autism. Blake has authored several publications on functional assessment procedures and has received clinical training and supervision (300+ hours) in behavioral assessment and intervention in autism and intellectual disabilities.

David Ball is an undergraduate student in Public Health at Brigham Young University. In addition to having a cousin with autism, he has received training in behavior management, teaching, and has experience in working with individuals with autism (150+ hours). For this specific study, David has been trained on ethical behavior and functional behavioral assessment.

Project Timetable

February 2013	Obtain IRB approval (completed)
June 2013	Start recruiting participants and interviewing parents (in progress)
January 2014	Analyze the data and work with a statistician
April 2014	Present findings in a conference and publish results in autism journals

Scholarly Sources

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2. Hanley, G. P., Iwata, B. A., & McCord, B. E. (2003). Functional Analysis of Problem Behavior: A review. *Journal of Applied Behavior Analysis*, 36(2), 147-185.
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4. Love, J. R., Carr, J. E., & LeBlanc, L. A. (2009). Functional Assessment of Problem Behavior in Children with Autism Spectrum Disorders: A summary of 32 outpatient cases. *Journal of Autism and Developmental Disorders*, 39, 363-371.
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6. Honey, E., McConachie, H., Turner, M., & Rodgers, J. (2012). Validation of the Repetitive Behavior Questionnaire for use with Children with Autism Spectrum Disorder. *Research in Autism Spectrum Disorders*, 6, 355-364.