Lay Abstracts

Title: Family focused autism spectrum disorder research: A review of the utility of family systems approaches

Authors: Cridland, Jones, Magee and Caputi

DOI: 10.1177/1362361314524681

Lay abstract: Families living with an autism spectrum disorder (ASD) face a range of distinct challenges. Family-focused ASD research is critical for understanding the impact these disorders have on family members and also for providing support services. While there has been increasing interest in such research, it can still be considered relatively recent and there are limitations to the existing literature. This article briefly reviews key areas of existing family-focused ASD research and highlights the need for a common theoretical framework in this area. We propose that Family Systems (FS) approaches represent such a framework. FS approaches consider families as unique interactive units with their own basic social system of rules, values, and goals. The benefits of FS approaches include theoretically sound concepts, focus on both positive and negative factors involved in living with ASD, and encourages including all family members in research. The theoretical concepts discussed include managing relationships and boundaries within and outside the family, managing the ambiguous feelings that may be experienced with living with ASD, and experiences of coping with and even growing from living with ASD. We discuss reasons why these concepts are important to researching families living with ASD, and provide recommendations for future research. The ways in which research using FS approaches may influence support services is also discussed.

Title: Loneliness, friendship, and well-being in adults with autism spectrum disorders

Authors: Mazurek

DOI: 10.1177/1362361314524681

Lay abstract: Adults with autism spectrum disorder (ASD) often experience significant difficulties with social and interpersonal functioning, and are also at increased risk for depression and anxiety. Surprisingly, very few studies have focused on the experiences of adults with ASD, or on the factors that may relate to their social and emotional functioning. Thus, the goal of this study was to examine the relations among loneliness, friendship, and emotional functioning in 108 adults with ASD. Participants completed self-report measures of ASD symptoms, loneliness, number and nature of friendships, depression, anxiety, life satisfaction, and self-esteem. The results indicated that loneliness was associated with increased depression and anxiety and decreased life satisfaction and self-esteem, even after controlling for symptoms of ASD. In addition, greater quantity and quality of friendships were associated with decreased loneliness among adults with ASD. This was the first study to examine the relations among these aspects of social and emotional functioning in adults with ASD, and the findings extend current knowledge in several important ways. The results highlight the clinical importance of loneliness among adults with ASD, and suggest a need for continued research in this area. Finally, strategies to reduce and prevent loneliness appear to be important targets for future research and clinical practice.

Title: Academic abilities in children and adolescents with a history of autism spectrum disorders who have achieved optimal outcomes

Authors: Troyb, Orinstein, Tyson, Helt, Eigsti, Stevens and Fein

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Lay abstract: This study explored reading, writing and mathematic skills in a group of children and adolescents who were diagnosed with an autism spectrum disorder (ASD) in early childhood, but who no longer meet diagnostic criteria for such a disorder. These individuals have achieved social and language skills within the average range for their ages and receive little or no school support, and are referred to as having achieved “optimal outcomes (OO).” Thirty-two individuals who achieved OO were compared to 41 high-functioning individuals with a current ASD diagnosis (HFA), and 34 typically developing peers.
(TD) on measures of decoding, reading comprehension, mathematical problem solving and written expression. The three groups were matched on age, sex and nonverbal IQ; however, the HFA group received significantly lower verbal reasoning scores than the OO and TD groups. The results of the study revealed average performance on all academic tasks across all three groups. Furthermore, the OO and TD group scored similarly on all academic tasks. The HFA group received significantly lower scores on subtests of reading comprehension and mathematical problem solving as compared with the OO group. These findings suggest that the academic abilities of individuals who achieved OO are similar to those of their TD peers, even in areas where individuals who have retained their ASD diagnoses exhibit some ongoing difficulty.

Title: Maladaptive cognitive appraisals in children with high-functioning autism: Associations with fear, anxiety and theory-of-mind

Authors: Sharma, Woolfson and Hunter

DOI: 10.1177/1362361312472556

Lay abstract: Unusual fears and exaggerated symptoms of anxiety are common across the autism spectrum, especially in children with high functioning autism spectrum disorder (HFASD). It has been suggested that inaccurate or skewed interpretations of events lead to fear and anxiety in harmless situations and these have been referred to as ‘cognitive appraisals’. The aim of the current study was to explore whether certain cognitive appraisals (which are known to be associated with fear and anxiety in typical children) may help to explain these emotions in children with HFASD. To assess this, children with and without HFASD were presented with a ‘frustrating’ scenario and were asked to complete questionnaires that measured their appraisals of the situation (e.g. describing their potential to solve the problem, their future expectancies) and also how fearful they would be in that situation. The results demonstrated that the children with and without HFASD differed significantly in their cognitive appraisals of the situation. These results are important as appraisals might be used to form the basis of cognitive restructuring techniques that could be used to counter anxiety in children with HFASD.

Title: Long-term outcomes of parent-assisted social skills intervention for high-functioning children with autism spectrum disorders

Authors: Mandelberg, Frankel, Cunningham, Gorospe and Laugeson

DOI: 10.1177/1362361312472403

Lay abstract: Children’s Friendship Training is a 12-week parent-assisted social skills group, which is delivered with the aid of a published treatment manual for therapists for up to 10 families at a time. This study evaluated the outcome of this intervention for families of high functioning children, diagnosed with autism spectrum disorder. Forty-six percent of 52 families receiving the intervention were contacted an average of 35 months after the end of treatment. They completed questionnaires and telephone interviews. The mean age of children was 12.6 years at the time of this study. Results suggested that Children’s Friendship Training can lead to lasting benefits for high functioning children with autism spectrum disorders, including increased social skills and increased invitations for play dates from peers, decreased problematic behaviors, reduced play date conflict, and lower levels of loneliness, when compared with reports before the start of treatment.

Title: Using Tic-Tac software to reduce anxiety-related behaviour in adults with autism and learning difficulties during waiting periods. A pilot study

Authors: Campillo, Herrera, Remírez de Ganuza, Cuesta, Abellán, Campos, Navarro, Sevilla, Pardo and Amati

DOI: 10.1177/1362361312472067

Lay abstract: Several studies report that some individuals with autism have difficulty with the perception and understanding of the concept of time. This can result in the appearance of anxiety symptoms or challenging behavior such as stereotypical movements that may be misinterpreted as ‘behavioral problems’. In this study, we tested the efficacy of the ‘Tic-Tac’ tool, a visual software application for representing time that we created to help individuals with autism to predict the duration of short waiting periods. Three young adults with autism and learning difficulties used Tic-Tac in waiting situations where they usually showed the following anxiety-related behaviors: stereotypies, nervous utterance, wandering and other examples of nervousness. The results revealed that the use of Tic-Tac decreased the anxiety-related behaviors in all three participants. These findings demonstrate the positive impact of Tic-Tac on individuals with autism and learning difficulties in waiting situations. These positive results open up the possibility of developing new tools in the future that facilitate the predictability of even larger time periods, such as days or hours.
**Title:** Association between severity of behavioral phenotype and comorbid attention deficit hyperactivity disorder symptoms in children with autism spectrum disorders

**Authors:** Rao and Landa

DOI: 10.1177/1362361312470494

**Lay abstract:** A substantial number of children with autism spectrum disorders (ASD) presenting at clinics and treatment facilities have co-occurring symptoms of attention deficit hyperactivity disorder (ADHD). Previous studies have focused mostly on samples of children being brought to specialty clinics, and have reported that children with ASD and ADHD are often more impaired than children with ASD only. The purpose of our study was to determine how often ADHD co-occurs in school-age children (4 to 8 years) with ASD participating in a study of child development at the Center for Autism and Related Disorders at the Kennedy Krieger Institute. A second aim of the study was to determine if children with co-occurring ASD and ADHD demonstrate more severe developmental profiles than children with ASD only. Results revealed that, out of 63 participants with ASD in the study, 18 (29%) were rated by their parents as having clinically significant symptoms of ADHD. We compared children with both ASD and ADHD with children with ASD only on measures of cognitive, social and adaptive functioning, and determined that the ASD+ADHD group was significantly more impaired in all areas as compared with the ASD only group. More research is needed to understand early predictors of children who will have both ASD and ADHD, and to understand more about the developmental patterns of children affected with both of these neurodevelopmental disorders. Such research may lead to the development of specialized treatments and interventions designed to improve outcomes and quality of life for this subgroup of children.

**Title:** Motor development in children at-risk of autism: A follow-up study of infant siblings

**Authors:** Leonard, Bedford, Charman, Elsabbagh, Johnson, Hill and The BASIS team

DOI: 10.1177/1362361312470037

**Lay abstract:** Recently researchers have identified that early motor skills (e.g. sitting, crawling, walking) support the development of other abilities such as language, school achievement and social interaction. This study assessed how early motor skills impact later motor and social outcomes in a group of children who were at increased risk of developing autism spectrum disorder (ASD) owing to having an older sibling with ASD. This is important because individuals with ASD have atypical or poor social and communication abilities, and some also have delayed or atypical motor skills. Parents completed questionnaires about their child at nine months, three years and then 5–7 years of age. Motor and social assessments were also conducted with the child at these ages, investigating a number of abilities such as drawing, balancing and ball skills, as well as social interaction and face processing. Children whose motor development was delayed in early life were less able than other children to complete the motor tasks easily at 5–7 years. They also found it harder to recognise facial expressions or to follow eye gaze than children who were not delayed, although they were equally able to recognise mouth movements and facial identity. While these children did not have ASD diagnoses themselves, delayed early motor skills did have an effect on skills that are often atypical in ASD, including motor and face processing abilities. Early identification and treatment of motor delays could have beneficial effects on other areas of development, and may be particularly significant for children at increased risk of developing ASD.

**Title: The relation of parent–child interaction qualities to social skills in children with and without autism spectrum disorders**

**Authors:** Haven, Manangan, Sparrow and Wilson

DOI: 10.1177/1362361312470036

**Lay abstract:** This study examined associations between parent–child interactions and the development of social skills in 42 children (21 typically developing and 21 with autism spectrum disorders) between the ages of 3:0 and 6:11 years. We expected that positive parent–child interaction qualities would be related to children’s social skills and would help explain some of the differences found in social skills based on children’s developmental status (i.e. typical development versus those with autism spectrum disorders). Videotapes of parents and children during a 5-minute wordless book-reading task were coded for parent positive affect and emotional support as well as parent–child cohesiveness. High levels of emotional support and cohesiveness were both related to higher social skills in children. Additionally, parent–child cohesiveness helped to explain the connection between children’s developmental status and their social skills. These findings suggest that parent emotional support, as well as cohesiveness between parents and children, positively influence children’s social skills.
Parent positive affect was unrelated to social skills. Implications of these findings for social skills interventions are discussed, particularly for young children with autism spectrum disorders.

**Title:** Understanding of emotions based on counterfactual reasoning in children with autism spectrum disorders

**Authors:** Begeer, De Rosnay, Lunenburg, Stegge and Meerum Terwogt

**DOI:** 10.1177/1362361312468798

**Lay abstract:** Counterfactual reasoning involves imagining alternatives to one or more features of a perceived event (e.g., being caught in a traffic jam). This type of reasoning can prepare us to be more cautious in future situations (e.g., “If only I had taken a different turn, I wouldn’t have been caught in this traffic jam”), but also help to regulate current emotional states (e.g., “At least I wasn’t in the accident [causing the traffic jam]”). In the present study, we investigated the understanding of emotions based on counterfactual reasoning in children with typical development or autism spectrum disorders (ASD), highlighting the different functions of such counterfactually based emotions, and the capacities that are needed to appreciate these functions. We found that, relative to the comparison group, children with ASD were poor at explaining emotions based on downward counterfactual reasoning (comparing a real outcome with a worse alternative, resulting in emotions like contentment and relief). There were no group differences in upward counterfactual reasoning (comparing a real outcome with a better alternative, resulting in emotions like disappointment and regret). In the comparison group, perspective taking abilities were related to children’s understanding of second-order counterfactual emotions (i.e., regret and relief), while children in the ASD group relied more on their general intellectual skills. Results are discussed in terms of the different functions of counterfactual reasoning about emotion, and the cognitive style of children with ASD.

**Title:** Comparing cognitive outcomes among children with autism spectrum disorders receiving community-based early intervention in one of three placements

**Authors:** Nahmias, Kase and Mandell

**DOI:** 10.1177/1362361312467865

**Lay abstract:** When receiving centre-based intervention in the community, preschoolers with autism spectrum disorders (ASD) are placed in settings only with other children with ASD, with children with a variety of special needs including ASD, and with typically developing peers. Autism-specific placements can provide intensive evidence-based care; however, inclusion settings provide interaction with typically developing peers, the importance of which is increasingly recognized. Little is known about which of these placements are best for which children with ASD. This study examined the association between the placement of children with ASD in one of three settings (autism-only, mixed disability, inclusive) in an urban school district and their cognitive functioning when they started elementary school. Children who attended inclusive placements made greater cognitive gains during preschool than children who attended mixed disability placements. Inclusive placements were particularly beneficial for children with initially lower social-emotional skills, lower adaptive behavior skills, or better communication skills. There were few significant differences in outcome between children in autism-only settings and children in either of the other two settings. These results provide preliminary insight into important child characteristics to consider when parents and providers make preschool early intervention placement decisions.

**Title:** Does a claims diagnosis of autism mean a true case?

**Authors:** Burke, Jain, Yang, Kelly, Kaiser, Becker, Lawer and Newschaffer

**DOI:** 10.1177/1362361312467709

**Lay abstract:** Administrative health records (from health insurance claims in the US) represent a potentially rich source of information for autism research. However, the accuracy of using these records to identify children diagnosed with autism has not been confirmed. The purpose of this study was to determine whether children with an autism spectrum disorder (ASD) as identified in administrative records also had ASD diagnoses in their medical charts. Out of a total of over 23,000 subjects who were eligible for the study, 432 paper charts were reviewed for children who fell into one of three groups: (1) ≥2 administrative records showing an ASD diagnosis (n = 182); (2) only one administrative record showing an ASD diagnosis (n = 190); and (3) those who had evidence of other developmental or neurological conditions associated with ASD in their administrative records but none showing an ASD diagnosis (n = 60). For each of these groups, the diagnoses in the administrative records were compared with the documentation that appeared in the charts. For children that
had at least two administrative records with ASD diagnoses, 87.4% or greater were confirmed as having ASD in their medical charts. This suggests that administrative health records are a valid source of information for research about children with ASD.

**Title: Using the Modified Checklist for Autism in Toddlers in a well-child clinic in Turkey: Adapting the screening method based on culture and setting**

**Authors:** Kara, Mukaddes, Altınkaya, Güntepe, Gökçay and Özmen

DOI: 10.1177/1362361312467864

**Lay abstract:** The Modified Checklist for Autism in Toddlers (M-CHAT) is a specific questionnaire to identify toddlers at risk for autism. The psychometric properties of this questionnaire (i.e. the reliability and validity) have been tested in several languages and cultures. However, there is no study investigating the use of the M-CHAT in Turkish. Therefore, we aimed to adapt the M-CHAT to be appropriate for Turkish culture. First, the M-CHAT was filled out independently by 191 parents while they were waiting for a paediatric examination in a well-child clinic. Following this, phone interviews were conducted with parents. These phone interviews revealed a high rate of false-positives (children receiving high scores on the M-CHAT when they did not meet the criteria for a diagnosis of autism). Because of this high false-positive rate, we decided to change our method. Therefore, a second study was conducted in which the M-CHAT was administered by healthcare staff in a short interview with two groups of parents. The first group (the high-risk group) comprised 80 children aged 18–36 months, who were referred to the child neurology division owing to social-communicative delays and received an initial diagnosis of an autism spectrum disorder. The second group (the low-risk group) comprised 538 children of the same age, who were followed regularly by the Well-Child Clinic. Two children in the low-risk group had positive screening results (suggesting a diagnosis of autism). These two children, a sample of 120 children from the low-risk group, and the entire high-risk group were invited to the clinic for an assessment for autism spectrum disorders. This study showed that the M-CHAT has a high positive predictive value (correctly diagnosing 75% of children). These results suggest that the M-CHAT is a useful tool in Turkey for screening for autism. However, for more accurate results in Turkish culture, it should be filled out with the help of health care staff. This study shows that M-CHAT screening should be adapted based on cultural differences and settings.