
Abstract

Objective

To examine differences in behavioral symptoms and cognitive functioning between males and females with autism spectrum disorder (ASD).

Method

We analyzed data from 2,418 probands with autism (304 females, 2,114 males) included in the Simons Simplex Collection. Sex differences were evaluated across measures of autism symptoms, cognitive and motor functioning, adaptive behavior, and associated behavior problems. Measurement bias was examined using latent variable models of symptoms. Unadjusted and propensity-adjusted analyses were computed to ensure sex differences were not due to unbalanced sampling. Moderator and mediator analyses evaluated whether sex differences were modified by clinical characteristics or driven by cognitive ability.

Results

Females with ASD had greater social communication impairment, lower levels of restricted interests, lower cognitive ability, weaker adaptive skills, and greater externalizing problems relative to males. Symptom differences could not be accounted for by measurement differences, indicating that diagnostic instruments captured autism similarly in males and females. IQ reductions mediated greater social impairment and reduced adaptive behavior in females with ASD, but did not mediate reductions in restricted interests or increases in irritability.

Conclusions

A specific female ASD phenotype is emerging that cannot be accounted for by differential symptom measurement. The present data suggest that the relatively low proportion of high functioning females may reflect the effect of protective biological factors or may be due to under-identification. Additional carefully-accrued samples are needed to confirm the present pattern and to evaluate whether observed sex ratios in high functioning cases are reduced if female-specific indicators of restricted interests are included.
Abstract

The development of language, social interaction, and communicative skills are remarkably different in the child with autism spectrum disorder (ASD). Atypical brain connectivity has frequently been reported in this patient population. However, the interplay between their brain connectivity and language performance remains largely understudied. Using diffusion tensor imaging tractography and resting-state fMRI, the authors explored the structural and functional connectivity of the language network and its relation to the language profile in a group of healthy control subjects ($N = 25$) and a group of children with ASD ($N = 17$). The authors hypothesized that in children with ASD, a neural connectivity deficit of the language network can be related to the observed abnormal language function. They found an absence of the right-hemispheric arcuate fascicle (AF) in 28% (7/25) of the healthy control children and in 59% (10/17) of the children with ASD. In contrast to healthy control children, the absence of the right-hemispheric AF in children with autism was related to a lower language performance as indicated by a lower verbal IQ, lower scores on the Peabody Picture Vocabulary Test, and lower language scores on the Dutch version of the Clinical Evaluation of Language Fundamentals (CELF-4NL). In addition, through iterative fMRI data analyses, the language impairment of children with ASD could be linked to a marked loss of intrahemispheric functional connectivity between inferior frontal and superior temporal regions, known as the cortical language network. Both structural and functional underconnectivity patterns coincide and are related to an abnormal language function in children with ASD.

**Abstract**

**Background**

Previous studies suggest that amygdala volume, when compared with healthy controls, is increased in young children with autism, is unchanged in cohorts of older youth, and is smaller in adults. Hippocampal volume, however, does not appear to have age-related changes, and it is unclear whether individuals with autism have volumetric differences in this structure. The goal of this pilot investigation is to characterize the developmental trajectories of the amygdala and hippocampus in children with autism between the ages of 8 and 14 years and to examine clinical correlates of volume change.

**Methods**

Twenty-three children with autism and 23 controls between the ages of 8 and 12 underwent a magnetic resonance imaging procedure of the brain (T1-weighted) at two time points. Nine children with autism and 14 controls had good quality scans from both time points; however, all usable scans from all subjects (15 children with autism and 22 controls) were included in a mixed effect analysis. Regression models were used to estimate group differences in amygdala and hippocampal volumes. Changes in amygdala and hippocampal volumes (Time 2 – Time 1) were correlated with clinical severity measures.

**Results**

Amygdala volume changes with time were similar between the two groups. Within the autism group, right amygdala volume change was correlated with the ability to establish appropriate eye contact. Right hippocampal volume was significantly increased in the autism group when compared with controls. Differences in right hippocampal volume change with time between the two groups approached significance.

**Conclusion**

This study provides preliminary evidence of normalization of amygdala volumes in late childhood and adolescence. It also suggests that hippocampal volumetric differences may exist in autism in late childhood and adolescence.

Abstract

Parents of children with autism spectrum disorder are known to experience more stress than parents of children with any other conditions. The current study describes the parental stress of 118 fathers and 118 mothers at the onset of their children’s Early Intensive Behavioral Intervention program. The objectives of the study were to compare and analyze each parent’s stress and to identify factors that might predict their stress. Results indicated that fathers reported higher levels of stress than mothers. Correlations indicated that the stress levels of both parents were associated with their child’s age, intellectual quotient, severity of autistic symptoms, and adaptive behaviors. Paternal stress, but not maternal stress, was predicted by severity of autistic symptoms and child’s gender. Results are discussed in terms of their implications for services and early interventions.


Abstract

Prior research assessing the relationship between autism spectrum disorder (ASD) symptom severity and sleep problems has considered the association in a unidirectional manner; researchers have primarily focused on how sleep difficulties affect ASD symptom presentation. Specifically, extant research literature on this topic indicates that sleep problems exacerbate ASD symptom severity. The present study provides an investigation of this topic in a bidirectional manner. Primary results corroborated the compounding effect of sleep problems on ASD symptom severity. Furthermore, the results of a multinomial linear regression provided preliminary evidence that increased ASD symptom severity may predict an increased likelihood of the presence of sleep problems. As such, the authors conclude that the relationship between ASD symptom severity and sleep problems should be considered bidirectionally in future research. Implications for a relationship in each direction are discussed.

Abstract

The purpose of this study was to determine health-related quality of life (HRQOL) among adults with autism, and compare it to the HRQOL of the general adult population in the United States (US). Factors predicting HRQOL of adults with autism were also identified. A cross-sectional online survey was conducted to gather study information. From adults with autism registered with the Interactive Autism Network (IAN), those aged 18 years and above and having the capacity to self-report were identified and approached for study participation. The final sample included 291 adults with autism. One-way t-test revealed adults with autism to have significantly lower physical and mental HRQOL than their counterparts in the US population. Using linear regression analysis, modifiable factors including social support and coping along with other socio-demographic and medical characteristics were identified as significant predictors of physical and mental HRQOL. Greater perceived adequacy of social support from friends and family was associated with better HRQOL, while greater use of maladaptive coping was associated with lower HRQOL. Clinicians and other health interventionist should consider assessing these factors among adults with autism, and provide necessary capabilities to these adults with the aim of improving their HRQOL.


Abstract

This review paper describes our current perspective of autism spectrum disorders (ASD), taking into account past, current and future classification systems and the evolving definitions of ASD. International prevalence rates from 1965 to 2012 are presented and key issues, including whether there is an epidemic of autism and what this means in terms of thinking about possible causes of autism, are discussed. Also discussed is the need for high quality national data collection in Australia and the evidence, and lack of evidence, for the many theoretical causes of ASD. The lack of robust classification of autism along with limited high quality evidence base about its prevalence and possible causes leaves ample space for future discoveries.

Abstract

This cross-sectional study examined perceived access to services, quality of care, and family impact reported by caregivers of children aged 3–17 years with autism spectrum disorders, as compared to caregivers of children with other developmental disabilities and other mental health conditions. The 2009–2010 National Survey of Children with Special Health Care Needs was utilized to examine the association between child’s special needs condition and three outcomes (N = 18,136): access to services (difficulty using services, difficulty getting referrals, lack of source of care, and inadequate insurance coverage), quality of care (lack of care coordination, lack of shared decision making, and no routine screening), and family impact (financial, employment, and time-related burden). Multivariate logistic regressions were performed to compare caregivers of children with autism spectrum disorders to caregivers of children with developmental disabilities (cerebral palsy, Down syndrome, developmental delay, or intellectual disability), mental health conditions (attention deficit hyperactivity disorder, anxiety, behavioral/conduct problems, or depression), or both developmental disabilities and mental health conditions. Caregivers of children with autism spectrum disorders were significantly more likely to report difficulty using services, lack of source of care, inadequate insurance coverage, lack of shared decision making and care coordination, and adverse family impact as compared to caregivers of children with developmental disabilities, mental health conditions, or both.


Abstract

The negative consequences of caring for people with developmental disabilities have been widely described. However, the ability to bounce back from the stress derived from care situations has been less studied. Those caregivers who have shown this ability are considered as resilient. This study aims to evaluate the relationship between resilience and self-reported health and cortisol awakening response (CAR) in a sample of caregivers of people with autism spectrum disorders (ASD). It also aims to evaluate the role of social support as a mediator in the association between resilience and health. Caregivers with higher resilience show better perceived health, lower morning cortisol levels, and less area under the curve with respect to ground (AUCg). Social support was positively related to resilience and mediated the relationship between resilience and perceived health. This mediating effect was not found in the association between resilience and CAR. Resilience could be a protective factor that modulates the negative consequences of chronic stress in the care context. Social support could be an important variable mediating the effects of resilience on health outcomes in caregivers. All these results must be considered when implementing effective psychological programs for helping caregivers.
Abstract

Impaired social functioning is a hallmark feature of autism spectrum disorder (ASD), often requiring treatment throughout the life span. PEERS® (Program for the Education and Enrichment of Relational Skills) is a parent-assisted social skills training for teens with ASD. Although PEERS® has an established evidence base in improving the social skills of adolescents and young adults with ASD in North America, the efficacy of this treatment has yet to be established in cross-cultural validation trials. The objective of this study is to examine the feasibility and treatment efficacy of a Korean version of PEERS® for enhancing social skills through a randomized controlled trial (RCT). The English version of the PEERS® Treatment Manual (Laugeson & Frankel, 2010) was translated into Korean and reviewed by 21 child mental health professionals. Items identified as culturally sensitive were surveyed by 447 middle school students, and material was modified accordingly. Participants included 47 teens between 12 and 18 years of age with a diagnosis of ASD and a verbal intelligence quotient (IQ) ≥ 65. Eligible teens were randomly assigned to a treatment group (TG) or delayed treatment control group (CG). Primary outcome measures included questionnaires and direct observations quantifying social ability and problems directly related to ASD. Secondary outcome measures included scales for depressive symptoms, anxiety, and other behavioral problems. Rating scales for parental depressive symptoms and anxiety were examined to detect changes in parental psychosocial functioning throughout the PEERS® treatment. Independent samples t-tests revealed no significant differences at baseline across the TG and CG conditions with regard to age (14.04 ± 1.64 and 13.54 ± 1.50 years), IQ (99.39 ± 18.09 & 100.67 ± 16.97), parental education, socioeconomic status, or ASD symptoms (p < 0.05), respectively. Results for treatment outcome suggest that the TG showed significant improvement in communication and social interaction domain scores on the Autism Diagnostic Observation Schedule, interpersonal relationship and play/leisure time on the subdomain scores of the Korean version of the Vineland Adaptive Behavior Scale (p’s < 0.01), social skills knowledge total scores on the Test of Adolescent Social Skills Knowledge—Revised (p < 0.01), and decreased depressive symptoms on the Child Depression Inventory following treatment (p < 0.05). Analyses of parental outcome reveal a significant decrease in maternal state anxiety in the TG after controlling for potential confounding variables (p < 0.05). Despite cultural and linguistic differences, the PEERS® social skills intervention appears to be efficacious for teens with ASD in Korea with modest cultural adjustment. In an RCT, participants receiving the PEERS® treatment showed significant improvement in social skills knowledge, interpersonal skills, and play/leisure skills, as well as a decrease in depressive symptoms and ASD symptoms. This study represents one of only a few cross-cultural validation trials of an established evidence-based treatment for adolescents with ASD.
Abstract

Background

Autism spectrum disorders (ASDs) comprise a range of neurodevelopmental conditions of varying severity, characterized by marked qualitative difficulties in social relatedness, communication, and behavior. Despite overwhelming evidence of high heritability, results from genetic studies to date show that ASD etiology is extremely heterogeneous and only a fraction of autism genes have been discovered.

Methods

To help unravel this genetic complexity, we performed whole exome sequencing on 100 ASD individuals from 40 families with multiple distantly related affected individuals. All families contained a minimum of one pair of ASD cousins. Each individual was captured with the Agilent SureSelect Human All Exon kit, sequenced on the Illumina Hiseq 2000, and the resulting data processed and annotated with Burrows-Wheeler Aligner (BWA), Genome Analysis Toolkit (GATK), and SeattleSeq. Genotyping information on each family was utilized in order to determine genomic regions that were identical by descent (IBD). Variants identified by exome sequencing which occurred in IBD regions and present in all affected individuals within each family were then evaluated to determine which may potentially be disease related. Nucleotide alterations that were novel and rare (minor allele frequency, MAF, less than 0.05) and predicted to be detrimental, either by altering amino acids or splicing patterns, were prioritized.

Results

We identified numerous potentially damaging, ASD associated risk variants in genes previously unrelated to autism. A subset of these genes has been implicated in other neurobehavioral disorders including depression (SLIT3), epilepsy (CLCN2, PRICKLE1), intellectual disability (AP4M1), schizophrenia (WDR60), and Tourette syndrome (OFCC1). Additional alterations were found in previously reported autism candidate genes, including three genes with alterations in multiple families (CEP290, CSMD1, FAT1, and STXBP5). Compiling a list of ASD candidate genes from the literature, we determined that variants occurred in ASD candidate genes 1.65 times more frequently than in random genes captured by exome sequencing (P = 8.55 x 10^-5).

Conclusions

By studying these unique pedigrees, we have identified novel DNA variations related to ASD, demonstrated that exome sequencing in extended families is a powerful tool for ASD candidate gene discovery, and provided further evidence of an underlying genetic component to a wide range of neurodevelopmental and neuropsychiatric diseases.

**Abstract**

There is limited information on autism spectrum disorders from lower- and middle-income countries (LMIC). This paper reviews the status of early identification and early intervention for autism spectrum disorders in response to the article by Camarata (2014). The PubMed database was searched to identify relevant epidemiological studies from LMIC. Seven studies from five countries were identified: Colombia, India, Jamaica, Jordan, and Mexico. The mean age of parental concern, at 21–24 months, and mean age of diagnosis, at 45–57 months, were similar in LMIC, but later than in high-income countries. Both country groups reported language disorder to be the symptom of initial concern. Similarities in biological aspects of the disorders were noted across LMIC and high-income countries. Comparable ages of identification and diagnosis across vastly different LMIC suggest limited resources to be the underlying contributory factor. Recommendations for improving early identification and intervention made by researchers in the LMIC are reported.


**Abstract**

The diagnostic validity of the new research algorithms of the Autism Diagnostic Interview–Revised and the revised algorithms of the Autism Diagnostic Observation Schedule was examined in a clinical sample of children aged 18–47 months. Validity was determined for each instrument separately and their combination against a clinical consensus diagnosis. A total of \( N = 268 \) children (\( n = 171 \) with autism spectrum disorder) were assessed. The new Autism Diagnostic Interview–Revised algorithms (research cutoff) gave excellent specificities (91%–96%) but low sensitivities (44%–52%). Applying adjusted cutoffs (lower than recommended based on receiver operating characteristics) yielded a better balance between sensitivity (77%–82%) and specificity (60%–62%). Findings for the Autism Diagnostic Observation Schedule were consistent with previous studies showing high sensitivity (94%–100%) and alongside lower specificity (52%–76%) when using the autism spectrum cutoff, but better balanced sensitivity (81%–94%) and specificity (81%–83%) when using the autism cutoff. A combination of both the Autism Diagnostic Interview–Revised (with adjusted cutoff) and the Autism Diagnostic Observation Schedule (autism spectrum cutoff) yielded balanced sensitivity (77%–80%) and specificity (87%–90%). Results favor a combined usage of the Autism Diagnostic Interview–Revised and Autism Diagnostic Observation Schedule in young children with unclear developmental problems, including suspicion of autism spectrum disorder. Evaluated separately, the Autism Diagnostic
Observation Schedule (cutoff for autism) provides a better diagnostic accuracy than the Autism Diagnostic Interview–Revised.


Abstract

Autism spectrum disorder (ASD) is a complex neurodevelopmental condition that occurs within the first 3 years of life, which is marked by social skills and communication deficits along with stereotyped repetitive behavior. Although great efforts have been made to clarify the underlying neuroanatomical abnormalities and brain-behavior relationships in adolescents and adults with ASD, literature is still limited in information about the neurobiology of ASD in the early age of life. Brain images of 50 toddlers with ASD and 28 age, gender, and developmental quotient matched toddlers with developmental delay (DD) (control group) between ages 2 and 3 years were captured using combined magnetic resonance-based structural imaging and diffusion tensor imaging (DTI). Structural magnetic resonance imaging was applied to assess overall gray matter (GM) and white matter (WM) volumes, and regional alterations were assessed by voxel-based morphometry. DTI was used to investigate the white matter tract integrity. Compared with DD, significant increases were observed in ASD, primarily in global GM and WM volumes and in right superior temporal gyrus regional GM and WM volumes. Higher fractional anisotropy value was also observed in the corpus callosum, posterior cingulate cortex, and limbic lobes of ASD. The converging findings of structural and white matter abnormalities in ASD suggest that alterations in neural-anatomy of different brain regions may be involved in behavioral and cognitive deficits associated with ASD, especially in an early age of 2–3 years old toddlers.


Abstract

The new DSM-5 diagnostic criteria for autism spectrum disorders (ASDs) include sensory disturbances in addition to the well-established language, communication, and social deficits. One sensory disturbance seen in ASD is an impaired ability to integrate multisensory information into a unified percept. This may arise from an underlying impairment in which individuals with ASD have difficulty perceiving the temporal relationship between cross-modal inputs, an important cue for multisensory integration. Such impairments in multisensory processing may cascade into higher-level deficits, impairing day-to-day functioning on tasks, such as speech perception. To investigate multisensory temporal processing deficits in ASD and their links to speech processing, the current study mapped performance on a number of multisensory temporal tasks (with both simple and complex stimuli) onto the ability of individuals with ASD to perceptually bind audiovisual speech signals. High-functioning children with ASD were compared with a group of typically
developing children. Performance on the multisensory temporal tasks varied with stimulus complexity for both groups; less precise temporal processing was observed with increasing stimulus complexity. Notably, individuals with ASD showed a speech-specific deficit in multisensory temporal processing. Most importantly, the strength of perceptual binding of audiovisual speech observed in individuals with ASD was strongly related to their low-level multisensory temporal processing abilities. Collectively, the results represent the first to illustrate links between multisensory temporal function and speech processing in ASD, strongly suggesting that deficits in low-level sensory processing may cascade into higher-order domains, such as language and communication.


Abstract

This study examined the bidirectional relations over time between behavioral functioning (autism symptoms, maladaptive behaviors, activities of daily living) and vocational/educational activities of adults with autism spectrum disorders (ASD). Participants were 153 adults with ASD (M age = 30.2 years) who were part of a larger longitudinal study. Data were collected at two time points separated by 5.5 years. Cross-lag models were used, which accounted for stability over time while testing both directions of cross-lagged effects. Results suggested that greater vocational independence and engagement was related to subsequent reductions in autism symptoms and maladaptive behaviors, and improvements in activities of daily living. Relations between earlier behavioral variables (symptoms, behaviors, and activities of daily living) and later vocational independence were not statistically significant.


http://www.cmaj.ca/content/early/2014/01/13/cmaj.121756

Abstract

Importance The DSM-5 contains revised diagnostic criteria for autism spectrum disorder (ASD) from the DSM-IV-TR. Potential impacts of the new criteria on ASD prevalence are unclear.

Objective To assess potential effects of the DSM-5 ASD criteria on ASD prevalence estimation by retrospectively applying the new criteria to population-based surveillance data collected for previous ASD prevalence estimation.

Design, Setting, and Participants Cross-sectional, population-based ASD surveillance based on clinician review of coded behaviors documented in children’s medical and educational evaluations from 14 geographically defined areas in the United States participating in the Autism and Developmental Disabilities Monitoring (ADDM) Network in 2006 and 2008. This study included 8-year-old children living in ADDM Network study areas in 2006 or 2008, including 644 883 children under surveillance, of whom 6577 met surveillance ASD case status based on the DSM-IV-TR.

Main Outcomes and Measures Proportion of children meeting ADDM Network ASD criteria based on the DSM-IV-TR who also met DSM-5 criteria; overall prevalence of ASD using DSM-5 criteria.

Results Among the 6577 children classified by the ADDM Network as having ASD based on the DSM-IV-TR, 5339 (81.2%) met DSM-5 ASD criteria. This percentage was similar for boys and girls but higher for those with than without intellectual disability (86.6% and 72.5%, respectively; P < .001). A total of 304 children met DSM-5 ASD criteria but not current ADDM Network ASD case status. Based on these findings, ASD prevalence per 1000 for 2008 would have been 10.0 (95% CI, 9.6-10.3) using DSM-5 criteria compared with the reported prevalence based on DSM-IV-TR criteria of 11.3 (95% CI, 11.0-11.7).

Conclusions and Relevance Autism spectrum disorder prevalence estimates will likely be lower under DSM-5 than under DSM-IV-TR diagnostic criteria, although this effect could be tempered by future adaptation of diagnostic practices and documentation of behaviors to fit the new criteria.

**Abstract**

Although children with Autism Spectrum Disorders (ASD) are thought to experience sleep problems at a much higher rate than typically developing peers, the relationship between sleep disturbance and Health-Related Quality of Life (HRQoL) has not been explored within this pediatric population. Further, little is understood about the HRQoL of children with ASD in general. This study assessed the HRQoL and sleep health of a sample of children with ASD and investigated the relationship between HRQoL and overall sleep problems within the context of key clinical characteristics. Study participants included 86 parents of children with ASD between the ages of 4 and 12 years. Subjects were recruited from 3 autism specialty clinics at large academic medical centers and asked to proxy-report on their children's HRQoL and sleep habits. Adjusted regression models showed a consistent negative relationship between sleep disturbance and HRQoL, with greater overall sleep problems being associated with poorer total, physical, and psychosocial HRQoL. Sleep duration and sleep anxiety were also found to be negatively associated with HRQoL. These findings suggest that treatments that are effective in treating sleep disturbances may improve children's HRQoL.


**Abstract**

Autism spectrum disorders (ASD) are characterized by difficulties with social interaction, verbal and nonverbal communication, and the development and maintenance of interpersonal relationships. As a result, individuals with ASD are at an increased risk of bullying victimization, compared to typically developing peers. This paper reviews the literature that has emerged over the past decade regarding prevalence of bullying involvement in the ASD population, as well as associated psychosocial factors. Directions for future research are suggested, including areas of research that are currently unexplored or underdeveloped. Methodological issues such as defining and measuring bullying, as well as informant validity and reliability, are considered. Implications for intervention are discussed.

Abstract

Background

Evidence about relevant outcomes is required in the evaluation of clinical interventions for children with autism spectrum disorders (ASD). However, to date, the variety of outcome measurement tools being used, and lack of knowledge about the measurement properties of some, compromise conclusions regarding the most effective interventions.

Objectives

This two-stage systematic review aimed to identify the tools used in studies evaluating interventions for anxiety for high-functioning children with ASD in middle childhood, and then to evaluate the tools for their appropriateness and measurement properties.

Methods

Electronic databases including Medline, PsychInfo, Embase, and the Cochrane database and registers were searched for anxiety intervention studies for children with ASD in middle childhood. Articles examining the measurement properties of the tools used were then searched for using a methodological filter in PubMed, and the quality of the papers evaluated using the COSMIN checklist.

Results

Ten intervention studies were identified in which six tools measuring anxiety and one of overall symptom change were used as primary outcomes. One further tool was included as it is recommended for standard use in UK children's mental health services. Sixty-three articles on the properties of the tools were evaluated for the quality of evidence, and the quality of the measurement properties of each tool was summarised.

Conclusions

Overall three questionnaires were found robust in their measurement properties, the Spence Children's Anxiety Scale, its revised version – the Revised Children’s Anxiety and Depression Scale, and also the Screen for Child Anxiety Related Emotional Disorders. Crucially the articles on measurement properties provided almost no evidence on responsiveness to change, nor on the validity of use of the tools for evaluation of interventions for children with ASD.

PLOS One is an open-access journal and you access the full version of this paper by following this link:

http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0085268

Abstract

Background

Clinically elevated anxiety is a common, impairing feature of autism spectrum disorders (ASD). A modular CBT program designed for preteens with ASD, Behavioral Interventions for Anxiety in Children with Autism (BIACA; Wood et al., 2009), was enhanced and modified to address the developmental needs of early adolescents with ASD and clinical anxiety.

Method

Thirty-three adolescents (11–15 years old) were randomly assigned to 16 sessions of CBT or an equivalent waitlist period. The CBT model emphasized exposure, challenging irrational beliefs, and behavioral supports provided by caregivers, as well as numerous ASD-specific treatment elements. Independent evaluators, parents, and adolescents rated symptom severity at baseline and post-treatment/post-waitlist.

Results

In intent-to-treat analyses, the CBT group outperformed the waitlist group on independent evaluators’ ratings of anxiety severity on the Pediatric Anxiety Rating Scale (PARS) and 79% of the CBT group met Clinical Global Impressions-Improvement scale criteria for positive treatment response at posttreatment, as compared to only 28.6% of the waitlist group. Group differences were not found for diagnostic remission or questionnaire measures of anxiety. However, parent-report data indicated that there was a positive treatment effect of CBT on autism symptom severity.

Conclusions

The CBT manual under investigation, enhanced for early adolescents with ASD, yielded meaningful treatment effects on the primary outcome measure (PARS), although additional developmental modifications to the manual are likely warranted. Future studies examining this protocol relative to an active control are needed.

**Abstract**

**Objective**

Changes in autism diagnostic criteria found in DSM5 may affect Autism Spectrum Disorder (ASD) prevalence, research findings, diagnostic processes and eligibility for clinical and other services. Utilizing our published, total-population Korean prevalence data, we compute DSM5 ASD and Social Communication Disorder (SCD) prevalence and compare them to DSMIV Pervasive Developmental Disorder (PDD) prevalence estimates. We also describe individuals previously diagnosed with DSMIV PDD when diagnoses change with DSM-5 criteria.

**Method**

The target population was all 7-12-year-old children in a South Korean community (N=55,266), those in regular and special education schools and a disability registry. We utilized the Autism Spectrum Screening Questionnaire for systematic, multi-informant screening. Parents of screen-positive children were offered comprehensive assessments using standardized diagnostic procedures, including the Autism Diagnostic Interview-Revised and Autism Diagnostic Observation Schedule. Best estimate clinical diagnoses were made using DSMIV PDD and DSM5 ASD and SCD criteria.

**Results**

DSM5 ASD estimated prevalence is 2.20% (CI: 1.77-3.64). Combined DSM-5 ASD and SCD prevalence is virtually same as DSM-IV PDD prevalence (2.64%). Most children with Autistic Disorder (99%), Asperger Disorder (92%), and PDD NOS (63%) met DSM-5 ASD criteria, whereas 1%, 8% and 32%, respectively, met SCD criteria. All remaining children (2%) had other psychopathology, principally Attention Deficit Hyperactivity Disorder and anxiety disorder.

**Conclusion**

Our findings suggest that most individuals with a prior DSMIV PDD meet DSM5 diagnostic criteria for ASD and SCD. PDD, ASD or SCD, extant diagnostic criteria identify a large, clinically meaningful group of individuals and families who require evidence-based services.