Research in Autism Spectrum Disorders 6 (2012) 971–977

Contents lists available at ScienceDirect

Research in Autism Spectrum Disorders

Journal homepage: http://ees.elsevier.com/RASD/default.asp

Cross cultural differences of parent reported social skills in children with autistic disorder: An examination between South Korea and the United States of America

Johnny L. Matson [a,*], Julie A. Worley [a], Alison M. Kozlowski [a], Kyong-Mee Chung [b], Woohyun Jung [c], Jae-won Yang [d]

[a] Louisiana State University, United States
[b] Yonsei University, South Korea
[c] Chungbuk National University, South Korea
[d] Kyungil University, South Korea

ARTICLE INFO

Article history:
Received 10 June 2011
Accepted 28 July 2011

Keywords:
Autism
ASD
Cultural differences
International study
Social skills

ABSTRACT

Symptoms of Autism Spectrum Disorders are universally accepted; however, the reported severity of symptoms may be sensitive to cultural differences. Therefore, the aim of the current study was to examine the differences in reported symptoms of appropriate and inappropriate social skills between children and adolescents from South Korea (SK) and the United States (US). Scores on the three subscales of the *Matson Evaluation of Social Skills with Youngsters, Second Edition (MESSY-II)* were compared between 147 participants from either SK ($n = 49$) or the US ($n = 98$). Children and adolescents from the two countries scored statistically different from each other on the Hostile, Adaptive/Appropriate, and Inappropriately Assertive subscales. However, the mean scores for participants from the two countries fell into the same impairment level on the *MESSY-II*, indicating no clinically significant differences. The implications of these results are discussed.

Children diagnosed with an Autism Spectrum Disorder (ASD) have significant deficits in three core domains: socialization, communication, and restricted interests and repetitive behaviors (Bakken et al., 2010; Duffy & Healy, 2011; Horovitz & Matson, 2010; Lanovaz & Sladeczek, 2011; Matson, Dempsey, & Fodstad, 2009; Matson, Wilkins, et al., 2009; Peter-Scheffer, Didden, Mulders, & Korzilius, 2010; Smith & Matson, 2010a). Of these three domains, impairment in socialization is often considered the most characteristic of the disorder (Volkmar et al., 1987) with a significant deficit in social skills being required for all disorders on the autism spectrum (Matson, Boisjoli, González, Smith, & Wilkins, 2007; Matson, Gonzalez, & Wilkins, 2009; Matson, Wilkins, et al., 2009). Social skills are a fundamental part of human development, and impairments within this area have many severe consequences. Children demonstrating social skills deficits are more likely to exhibit challenging behaviors (Matson, Dempsey, & Fodstad, 2009; Matson, Fodstad, & Rivet, 2009; Matson & Rivet, 2008; Rojahn et al., 2009; Smith & Matson, 2010b), experience academic difficulties (McClelland, Acock, & Morrison, 2006), and demonstrate difficulties with peer interactions (Inderbitzen-Pisaruk & Foster, 1990). Given the impact of these deficits, accurate assessment of social impairment within the ASD population is necessary to guide treatment planning.

Normative social skills vary between different groups and are influenced by many variables including gender, age, and ethnicity. First, researchers investigating gender differences with respect to social skills in childhood have found that the

* Corresponding author at: Department of Psychology, Louisiana State University, Baton Rouge, LA 70803, United States.
E-mail address: johnmatson@aol.com (J.L. Matson).

1750-9467/$ – see front matter © 2011 Elsevier Ltd. All rights reserved.
doi:10.1016/j.rasd.2011.07.019

underlying constructs of social skills are stable across genders (Van Horn, Atkins-Burnett, Karlin, Ramey, & Snyder, 2007). However, significant differences exist between males and females, with females exhibiting greater positive social skills and less negative social skills (Anme et al., 2010; Crombie, 1988; Méndez, Hidalgo, & Inglés, 2002). In contrast, research conducted within the ASD population has not yielded significant gender differences in the domains of social relationships and nonverbal communication/socialization (Rivet, 2010). Thus, this inconsistency in gender differences in social skills may be dependent on the population studied (e.g., typically developing, ASD) and specific social skills examined.

Another variable that may affect skill ability in socialization is age. Specific social skills develop at different ages throughout the childhood and adolescent years. For example, during the preschool years social skill development focuses on the coordination of play activities (Denham, von Salisch, Olthof, Kochanoff, & Caverly, 2002). However, during later childhood the focus surrounds social acceptance and group membership (Denham et al., 2002). As a result, social skills are dependent on age and development and, therefore, differences would be evident between groups of children at different ages. However, when examining social skills specific to an ASD diagnosis, symptoms are relatively stable throughout childhood, even under the age of 3 (e.g., Lord et al., 2006; Worley, Matson, Mahan, Kozlowski, & Neal, 2011). Similarly, when utilizing age cohorts (i.e., ages 3–5, ages 6–8, ages 9–11) for older children, no significant differences have been reported on symptoms of ASD dependent on age, including symptoms within the socialization domains (Matson, Hess, Neal, Mahan, & Fodstad, 2010). Therefore, this demonstrates that symptoms of ASD within the socialization domain are relatively unaffected by age.

Ethnic differences have also been examined with researchers stating that the underlying constructs of social skills across ethnicities (i.e., Caucasian, African American, and Hispanic) may vary, leading to differences across ethnic groups in apparent social skills on some assessments (Van Horn et al., 2007). When looking at social skills and problems behaviors among these ethnic groups, Caucasians demonstrate the least amount of variance followed by African American children and then Hispanic children. However, other researchers have failed to find differences in the underlying social skills constructs between Caucasian and non-Caucasian children (Walthall, Konold, & Pianta, 2005). Furthermore, researchers have also reported nonsignificant differences between children from the United States of America (US), United Kingdom (UK), South Korea (SK), and Israel on the core symptom domain of socialization when utilizing participants who were diagnosed with an ASD (Matson, Worley, et al., 2011).

The research reviewed above highlights the impact certain demographic variables may have on socialization with conflicting results. While ASD are accepted world-wide as a spectrum of disorders, and the diagnostic criteria are largely consistent between cultures, discrepancies have been found with respect to the presentation of overall ASD symptoms between some cultures (i.e., US, UK, SK, and Israel; Matson, Worley, et al., 2011). For instance, significant differences were found between countries on the verbal communication and insistence on sameness/restricted interests domains. In addition, participants from the countries scored significantly different from each other on the domain of nonverbal communication/socialization, but not on the social relationships domain. Since both of these domains pertain to overarching social skills related to the diagnostic criteria characteristic of children with ASD, the purpose of the present study is to conduct a more fine-grained analysis of social skills similarities and disparities between the US and SK. Although no differences emerged between the participants from the US and SK in the domain of social relationships, participants from the US scored significantly higher (i.e., indicating more impairment) than those from SK on the factor of nonverbal communication/socialization (Matson, Worley, et al., 2011). The current study further explored social skills to determine which aspects of socialization are considered problematic across cultures and to determine if differences exist in more specific social skills (i.e., negative and positive skills).

1. Method

1.1. Participants

Participants included 147 children and adolescents, ranging in age from 2 through 16 years old, recruited from SK ($n = 49$) or the US ($n = 98$). The 147 participants were selected from a total of 739 participants initially recruited for this study. Of the 739 participants, 535 were recruited from the United States and 204 were recruited from South Korea. Informants were parents, grandparents, or caretakers. Recruitment for the SK participants took place at schools, institutions, hospitals, and welfare facilities. For the US, participants were recruited from schools, outpatient clinics, advocacy groups, and support groups. Refer to Table 1 for the demographic information of the children/adolescents and their informants.

For the purposes of this investigation, participants had to meet research criteria for autistic disorder (AD). Including only those meeting criteria for AD and not the whole spectrum of disorders (e.g., Asperger's disorder and Pervasive Developmental Disorder Not Otherwise Specified) allowed the researchers to control for the severity of symptoms of ASD. Research diagnoses of AD were made consistent across the two sites using the *DSM-IV-TR*/*ICD-10 Checklist*. This checklist includes 19 symptoms indicative of an ASD diagnosis based on criteria from the *DSM-IV-TR* (American Psychiatric Association [APA], 2000) and the *International Classification of Diseases*, *Tenth Edition* (World Health Organization, 1992). This checklist has sound psychometric properties as the internal consistency ($\alpha = .95$), interrater reliability ($r = .89$), and test-retest reliability ($r = .97$) were all excellent (Matson, González, Wilkins, & Rivet, 2008). All items on the checklist were completed by informants (i.e., parents, grandparents, or teachers) with respect to the child's behavior. Informants respond to each item as "yes" if the symptom was applicable to their child or "no" if it was not. For participants to be classified as having