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Cross cultural differences in challenging behaviors of children with autism spectrum disorders: An international examination between Israel, South Korea, the United Kingdom, and the United States of America☆

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ABSTRACT

Challenging behaviors are deemed extremely common within the autism spectrum disorders (ASD) population. Numerous factors and their effects upon the presence and severity of challenging behaviors within this population have been investigated. However, there has been limited research to investigate the effects of cultural differences on challenging behaviors. The aim of the current study was to examine differences between cultures in the reported presence and severity of a multitude of challenging behaviors commonly displayed by children with ASD. The *Autism Spectrum Disorders-Behavior Problems for Children* was used to assess possible differences between the United States and three other countries (South Korea, Israel, and the United Kingdom). Relatively few differences were found between the United States and both South Korea and Israel, with the United States endorsing a higher presence and severity on items that differed. In contrast, the United States and the United Kingdom differed on nearly half of the behavior items assessed with the United Kingdom reporting greater endorsements. The potential implications of these results are discussed.

Individuals diagnosed with autism spectrum disorders (ASD) are characterized by delays in socialization and communication skills as well as the presence of rituals and stereotypies (Fernell & Gillberg, 2010; Sevlever & Gillberg, 2010). Additionally, these individuals engage in a variety of challenging behaviors, including aggression, self-injurious behaviors, and stereotypies. These problem behaviors are exhibited by about half of individuals carrying such diagnoses (Baghdadli, Pascal, Grisi, & Aussilloux, 2003; Bodfish, Symons, Parker, & Lewis, 2000; Holden & Gitlesen, 2006; Matson, Wilkins, & Macken, 2009; Murphy, Healy, & Leader, 2009), and these difficulties are often the family's initial cause for concern and

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reason for pursuing treatment (Mudford et al., 2008). The presence of challenging behaviors, especially with heightened severities, can have a number of negative consequences such as risk of self-injury, injury to others, interruption in the acquirement and maintenance of skills, increased stigmatizing effects, increased use of physical restraints, psychotropic drug use and abuse, and institutionalization (Antonacci, Manuel, & Davis, 2008; Farmer & Aman, 2010; Mudford et al., 2008). A number of factors may be associated with the presence and severity of challenging behaviors among individuals with ASD (Niklasson, Rasmussen, Óskardóttir, & Gillberg, 2009; Singh et al., 2009). Prior research has repeatedly found that the severity of ASD symptoms, based either on symptom endorsements or differential diagnosis of ASD, correlates with the presence and severity of challenging behaviors (Kozlowski & Matson, 2012; Matson et al., 2009). As the severity of ASD symptoms increases, challenging behaviors increase as well. Additionally, the progression of challenging behaviors among different age groups (i.e., young children, adolescents) does not significantly differ, suggesting that the presence and severity of challenging behaviors is relatively stable within the ASD population (Matson, Mahan, Hess, Fodstad, & Neal, 2010). Gender differences have also been examined within the ASD population with respect to challenging behaviors, but results are inconsistent between studies with some suggesting that there are no differences between males and females (e.g., Murphy et al., 2009) and others finding that males may be more likely to engage in certain challenging behaviors (e.g., McClintock, Hall, & Oliver, 2003). Nonetheless, an attempt to assess for differences between genders has been made. However, the impact of cultural influences has rarely been addressed, which may further impact the presence and severity of these problem behaviors. This is especially true given that culture is known to play a major role in behavioral presentation and development (Scarborough & Poon, 2004).

To date, the vast majority of research related to differences in the presence and severity of challenging behaviors between cultures can only be approximated based on separate studies examining the prevalence of these behaviors in specific areas (Holden & Gitlesen, 2006; Matson et al., 2009; Murphy et al., 2009; Shin, Chung, & Park, submitted for publication). Although such approximations are likely not indicative of significant differences between cultures due to differences in research methodologies, their mention is warranted given the goal of the current study. In a United States (US) sample drawing participants solely from the state of South Carolina, at least 54% of children with an ASD diagnosis were found to engage in some form of challenging behavior. In another study conducted in the US recruiting participants from a total of 16 different states, 94.3% of children were identified as engaging in some form of challenging behavior (Matson et al., 2009). Percentages of the presence of challenging behaviors among children with ASD have been shown to vary across other cultures; 35.8% in Norway (Holden & Gitlesen, 2006), 64.3% in Ireland (Murphy et al., 2009), and 30% in South Korea (Shin et al., submitted for publication). Clearly, variable prevalence rates are seen across countries although the specifics of these differences cannot be determined based on the data provided. Furthermore, the aforementioned studies did not collect behavioral data in the same fashion so that different methodologies may have affected their results, thus compromising the ability to compare the findings between countries. Therefore, the aim of the present study was to examine the possibility of such differences using the *Autism Spectrum Disorders-Behavior Problems for Children* (Matson & González, 2007). The US was compared to South Korea, Israel, and the United Kingdom (UK).

1. Methods

1.1. Participants

Two hundred and eighty-five children aged 2–16 years from four different countries, namely, Israel ($N = 48$), South Korea ($N = 54$), the UK ($N = 27$), and the US ($N = 156$), were studied. The study sample from Israel consisted of children who were referred to an autism center housed within a medical center. The Autism Center is a national center that provides diagnostic and treatment services and is involved in research in the field of ASD. The sample from South Korea consisted of children and adolescents who were recruited from numerous sites including institutions, middle schools, hospitals, and welfare facilities. The UK sample was recruited from a total of seven schools. These schools specialized in working with children diagnosed with an ASD, Intellectual Disability (ID), or the combination of both ASD and ID. The US sample was recruited from a variety of sources (e.g., outpatient clinics, schools, parent advocacy and support groups) throughout 16 states in the US. Each participant was diagnosed with an ASD based on a 19-item checklist assessing ASD diagnostic criteria from the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (*DSM-IV-TR*; American Psychiatric Association [APA], 2000) and the *International Classification of Diseases, Tenth Edition* (*ICD-10*; World Health Organization [WHO], 1992). These diagnostic criteria include deficits in communication and socialization as well as restricted and/or repetitive behavior patterns. The *DSM-IV-TR/ICD-10* checklist has good psychometric properties, including high internal consistency, inter-rater reliability, and test–retest reliability (Matson, González, & Rivet, 2008). The *DSM-IV-TR/ICD-10* checklist was completed by an informant, and children were included in the study if at least two socialization impairments were endorsed and at least one impairment in communication or a restricted and/or repetitive behavior pattern was endorsed (Matson, González, Wilkins, & Rivet, 2008).

Data on 599 children were initially collected for this study. However, 20 children from Israel, 11 from South Korea, 9 from the UK, and 221 from the US were excluded from the study because they did not meet ASD criteria based on the DSM-IV-TR/ICD-10 checklist. Additionally, one participant from Israel and eight participants from the US were excluded because they had more than one missing data point. For participants with only one data point missing, the mean score on that item for their country was used.