Research in Developmental Disabilities 36 (2015) 459–469

Contents lists available at ScienceDirect

Research in Developmental Disabilities

Emotional and behavioural difficulties in children referred for learning disabilities from two Arab countries: A cross-cultural examination of the Strengths and Difficulties Questionnaire

Mogeda El-Keshky [a,*], Mahmoud Emam [b]

[a] King Abdul Aziz University, Department of Psychology, Faculty of Arts, P.O. Box 42803, Jeddah 21551, Saudi Arabia
[b] Sultan Qaboos University, Department of Psychology, College of Education, P.O. Box: 32, Al-Khod 123, Oman

ARTICLE INFO

Article history:
Received 3 September 2014
Accepted 24 October 2014
Available online

Keywords:
Emotional and behavioural difficulties
Learning disabilities
A cross-cultural examination
The Strengths and Difficulties Questionnaire
Factorial structure

ABSTRACT

The Strengths and Difficulties Questionnaire (SDQ) is a widely used child mental health questionnaire with five hypothesized subscales. There is theoretical and preliminary empirical support for combining the SDQ's hypothesized emotional and peer subscales into an 'internalizing' subscale and the hypothesized behavioural and hyperactivity subscales into an 'externalizing' subscale (alongside the fifth prosocial subscale). We examined both structures using the teacher informant version data from two Arab countries, namely Saudi Arabia (323) and Oman (439). Multigroup CFAs based on structural equation modelling revealed culture invariance for the SDQ. The three-factor model showed a better description of the SDQ structure. The analysis also revealed gender invariance for the SDQ three and five factor models in both the Omani and Saudi samples. There were gender differences in all the three and five factors between the Saudi and Omani samples.

1. Introduction

Children with learning disabilities (LD) face challenges, not only in academic areas, but also in social, emotional and behavioural domains (Dyson, 2003; Semrud-Clikeman & Hynd, 1990). Compared to typically developing peers, children with LD tend to exhibit social deficit, behavioural problems and emotional difficulties (McClelland, Morrison, & Holmes, 2000; Vaughn & Fuchs, 2003) and these problems are likely to continue into adulthood (Kavale, 1996). Clearly, it is important to identify children's difficulties as early as possible, so that effective interventions can be put in place to prevent the chronic co-morbidity of LD and psychopathology. However, measurement and identification of such difficulties can be challenging (Emam, 2012).

The assessment of emotional and behaviorual difficulties in children with LD tends to focus on social and emotional pathology rather than prosocial qualities. Various sociometric and questionnaire methods have been developed in Western cultures to identify children with different emotional and behavioural problems (Mishna, 2003; Nabuzoka, 2003; Nabuzoka & Smith, 1993). Some of these instruments were validated in Arab countries and were adapted to the Arabic culture (Emam, 2012). However, measures which specifically examine emotional and behavioural weaknesses as contrasted to strengths in children with LD are less common and limited in their focus.

* Corresponding author. Tel.: +966 500353245.
E-mail addresses: drmogeda@gmail.com, melkshky@kau.edu.sa (M. El-Keshky), memam@squ.edu.om (M. Emam).

http://dx.doi.org/10.1016/j.ridd.2014.10.039
0891-4222/

Generally, emotional and behavioural characteristics of children with LD have been assessed via proxy reports that are completed by parents and/or teachers or through self-report measures (Dyson, 1996, 2003). One of the most widely used instruments to identify emotional and behavioural difficulties in children and young men is the Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997). The SDQ in its different language versions has been widely used in a variety of studies (Di Riso et al., 2010; Du, Kou, & Coghill, 2008; Giannakopoulos et al., 2009; Koskelainen, Sourander, & Kaljonen, 2000; Matsuishi et al., 2008; Mullick and Goodman, 2001; Van Widenfelt, Goedhart, Treffers, & Goodman, 2003; Woerner, Becker, & Rothenberger, 2004). For instance, it has been used as a screening tool in prevalence studies (Mullick and Goodman, 2001; Thabet, Stretch, & Vostanis, 2000; Van Widenfelt et al., 2003; Vogels, Crone, Hoekstra, & Reijneveld, 2009) and double face studies (Goodman, Ford, Simmons, Gatward, & Meltzer, 2000; Goodman, Renfrew, & Mullick, 2000; Mathai, Anderson, & Bourne, 2004) aiming to compare or specify the more important psychometric properties. Recently its use has become widespread as one of the tools used to dimensionally measure child mental health (Goodman and Goodman, 2009). The sound data on the psychometric properties of the parent and teacher versions of the SDQ provides strong support for its use as a screening instrument for research and epidemiological studies.

The SDQ factor structure and psychometric properties have been widely replicated in samples from United Kingdom, Europe, Asia, USA and Australia (Du et al., 2008; Giannakopoulos et al., 2009; Goodman, 2001; Hawes and Dadds, 2004; Matsuishi et al., 2008; Palmieri and Smith, 2007; Smedje, Broman, Hetta, & Von Knorring, 1999; Woerner et al., 2004). Various factor analytic studies have produced mixed results. A Dutch study with typically developing children found that a four factor solution (emotional symptoms, prosocial behaviour, hyperactivity/inattention and a mixed factor labelled antisocial tendencies) was more appropriate (Muris, Meesters, and Van den Berg, 2003), while a US study of the parent version revealed a three factor solution (externalizing problems, internalizing problems, and social/peer problems) (Dickey & Blumberg, 2004). In general, for the proxy version a five factor solution has been established as the most adequate model (Hill & Hughes, 2007; Sanne, Torsheim, Heiervang, & Stormark, 2009; Van Roy, Veenstra, & Clench-Aas, 2008) while for the self-report version, a three factor model has shown better fit statistics for typically developing children (Goodman, Lamping, & Ploubidis, 2010; Percy, McCrystal, & Higgins, 2008; Ruchkin, Jones, Vermeiren, & Schwab-Stone, 2008).

Recently, the authors of the SDQ re-examined its factor structure, testing both the original five factor model and the three factor model that was gaining support (Goodman et al., 2010). They also tested a five factor second order model, in which the emotional and peer subscales were combined to provide an internalizing second order factor, and the conduct and hyperactivity subscales were combined to form an externalizing second order factor. Goodman et al.'s (2010) results demonstrated that both three and five factor models fitted the data for parent, teacher and child; however, there were some differences across the groups. While parent data showed a better fit to the three factor model, teacher data showed a better fit to the five factor model, although only adequate, and the self-report data showed a similar fit to both models; however, neither model was a strong fit. For all three groups of participants, the five factor second order model was the best fit. Discriminant validity highlighted that while the five factor model was able to discriminate between clinical disorders in high-risk identified children, this trend was not consistent across low risk populations. Thus, the authors concluded that the three factor model was an appropriate screener in low risk populations, but for high-risk groups the five factor model could be usefully employed.

2. The current study

All of the factor analytic studies cited above have been performed in samples of typically developing children. To date, there has been no factor analysis of the SDQ in a sample of children with LD. The SDQ has a number of advantages that make it suitable for children with LD. Compared with similar scales such as the Behaviour Assessment System for Children (BASC, Reynolds & Kamphaus, 2004) or the Child Behaviour Checklist (CBCL) (Achenbach, 1991), it is much shorter, yet retains adequate predictive validity (Goodman & Scott, 1999). Unlike the CBCL, the SDQ has been well established for use in typically developing populations, with norms being available for many countries, so that direct comparisons between atypical children and their typically developing peers can be made. Another advantage over the CBCL is that the SDQ has identical self and proxy versions, enabling information to be collected from multiple sources and compared directly.

The factor structure of the SDQ may differ by sample characteristics, particularly age, and informant. Only two studies have tested whether the SDQ displays measurement invariance across different sociodemographic subgroups of youth, particularly ethnic subgroups and youth from economically disadvantaged families. Hill and Hughes (2007) found that model fit was comparable across gender and ethnic groups of young children, whereas a study of Norwegian children and adolescents aged 10–19 years (Van Roy et al., 2008) revealed that factor loadings were not equal across age groups, with different factor loadings for pre-adolescents compared to adolescents. However, none of these previous studies has tested whether the SDQ displays measurement invariance across different cultural groups.

In spite of the availability of the Arabic version of the SDQ, the empirical research conducted in the Arab world is still quite minimal (Woerner et al., 2008). For example, the Arabic version was used to establish mental health profiles in a community based sample of 322 Arab children and adolescents living in the Gaza strip (Thabet et al., 2000). Parent and teacher ratings for the investigated ages of 3, 6, 11, and 16 years as well as self-reports of 11- and 16-year-olds were obtained with the Arabic translation of the SDQ. Based on a number of factor analyses of the parent reports, this early evaluation concluded that the