



ORIGINAL ARTICLE

# Reliability and Validity of the Activity Participation Assessment for School-age Children in Korea



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assessment;  
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**Summary Objective:** This pilot study examined the internal consistency, test–retest reliability, construct validity, and discriminant validity of the Activity Participation Assessment (APA) for school-age children in Korea.

**Methods:** The construct validity of the APA was first established by factor analysis on the response of 134 nondisabled children. Internal consistency was evaluated for each of the factors. A test–retest study was conducted on 22 nondisabled children. Discriminant validity was established by comparing the participation of 56 nondisabled children and 56 children with intellectual disabilities and examining sex differences of 61 boys and 61 girls.

**Results:** Analysis of the APA revealed five factors, which were labeled as instrumental activities of daily living (IADL), sports and outdoor activities, hobbies and school activities, social activities, and personal care. The factors showed acceptable levels of internal reliability (Cronbach's alpha = .63–.89). The intraclass correlation coefficient (ICC) for the five factors were all in the good range (ICC = .86–.92). We found statistically significant difference between nondisabled children and children with intellectual disabilities in five factors. We also found that girls participated in significantly more IADL, hobbies and school activities, and social activities. However, boys participated in significantly more sports and outdoor activities.

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*Conclusion:* The APA shows good internal reliability, test–retest reliability, discriminant validity, and construct validity. However, evidence of psychometric properties was limited by a small sample size. Psychometric properties such as interrater reliability as well as concurrent validity and construct validity need to be tested using a larger sample size with representative demographics.

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## Introduction

Participation is defined as a person's "involvement in life situations" and is viewed as resulting from the interaction of individuals with their social and physical environments (World Health Organization, 2001). The World Health Organization's International Classification of Functioning, Disability and Health (ICF) defines health as comprehensive, meaning including body function and structure, activity, and participation. Participation has been associated with important aspects of daily living such as mobility, social relationships, and activities related to work or school (Law, 2002). ICF emphasises how disabilities affect an individual's daily life and participation beyond the meaning of his/her physical and functional deficits (World Health Organization, 2001). That is, participation in life situations is an important element in determining health and disabilities.

Maintenance of performance and participation in activities is currently a paradigm of the time for occupational therapy (American Occupational Therapy Association, 2008; Pierce, 2003). The American Occupational Therapy Association includes participation as a performance area in the Occupational Therapy Practice Framework. Today, participation is a core value of client-centred occupational therapy (Berg & LaVesser, 2006). Since the announcement of the ICF, participation has become a major concern in rehabilitation, and developing an evaluation tool focused on occupation and participation has become a priority task in the occupational therapy area (Bundy, 1990; Coster, 1998; King et al., 2002; Townsend, 1998; Trombly, 1993; Whiteford, Townsend, & Hocking, 2000).

Recent research on the participation of children has been concerned with the differences in participation between nondisabled children and children with disability (Brown & Gordon, 1987; DeGrace, 2004; Ehrmann, Aeschleman, & Svanum, 1995; Engel-Yeger, Jarus, Anaby, & Law, 2009; Gray, 1997; King et al., 2006; Law et al., 2006; Mancini, Coster, Trombly, & Heeren, 2000; Van den Berg-Emons et al., 1995). Tools available to evaluate children's participation include the Pediatric Interest Profile (Henry, 2000), Children's Assessment of Participation and Enjoyment and Preferences for Activities of Children (CAPE & PAC) (King et al., 2004), Children's Leisure Assessment Scale (CLASS) (Rosenblum, Sachs, & Schreuer, 2010), and Pediatric Activity Card Sort (PACS) (Bowman, 1999). These evaluation tools measure diverse aspects of participation in one's life situations such as personal care, mobility, social relationship, home life, and education. All of the tools were developed in North America except for the CLASS, and each included typical activities thought to be influenced by one's

cultural environment and background (Connolly, Law, & MacGuire, 2005).

Although there are available foreign assessment tools, the tools measuring participation reflect each nation's unique culture, environment, language, and regional characteristics (Custers, Hoijtink, van der Net, & Helders, 2002; World Health Organization, 2001). Therefore, there are many limitations in using the assessment tools developed in other countries to measure the participation of children in a given culture. For example, cursive writing included in school/productivity domain of the PACS is not applicable to Korean children, whose native alphabet is Hangeul. Moreover, activities such as playing golf, yachting and canoeing, and horse riding are not ordinary sports for Korean children. Korean children participate in the unique Korean bath culture (e.g., public bath or Korean sauna) with their parents and attend classes at different academic institutions to supplement their mainstream education. The children also commonly use cellular phones, computers, and the Internet. Accordingly, applying foreign assessment tools for Korean children may not provide accurate results. However, no assessment tool exists to date that measures participation in a comprehensive set of activities of Korean school-age children.

Most prior Korean research on children's participation measured participation of leisure activities using questionnaires generated by the researchers in accordance with their specific study purposes. Such questionnaires cannot be considered representative of the activity of Korean children because activity was not assessed in a large population, and each questionnaire's reliability and validity has not been verified. Therefore, the aforementioned questionnaires cannot be used as assessment tools.

The ICF has stressed that successful rehabilitation needs to be measured via activity and participation level (World Health Organization, 2001). Occupational therapists need a tool to measure participation so that they can promote social participation and achieve successful rehabilitation of children with disabilities; therefore, development of such a tool is urgently needed in Korea. The Activity Participation Assessment (APA) developed in the current study was used to measure participation of school-age children in Korea. The APA will be useful for occupational therapists to establish intervention plans to promote participation of children and assist them in setting individual treatment goals for children. Therefore, the purpose of this study was to provide preliminary information about construct validities, internal consistency, and test–retest reliability for clinical use of the APA and to explore its usefulness in school-age children in Korea.

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