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Psychometric validation of the Family Outcome Survey-Revised in Singapore

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ABSTRACT

This study sought to examine the construct validity of the Family Outcomes Survey-Revised (FOS-R) in Singapore, describe the extent to which family outcomes of early childhood intervention (ECI) are attained, and obtain caregivers' perception on the extent to which ECI has served their needs. The FOS-R was translated into Chinese (simplified) and Malay for use in Singapore. Bilingual (i.e., English-Chinese and English-Malay) versions of the instrument were distributed to caregivers of young children with disabilities receiving ECI in four centers in Singapore. A total of 291 surveys were available for analyses (response rate of 43.1%). Confirmatory factor analyses indicated that there was a fit between the current data set and the FOS-R structure proposed by the developers. Overall, the participants reported moderately high attainment of family outcomes. They also reported that the ECI programs were mostly helpful. Other aspects of the cross-cultural application of instruments were considered and implications for local service provision as well as directions for future research were discussed.

1. Introduction

1.1. Family centered practice

Family centered practice is recognized as a cornerstone of early childhood intervention (ECI) practice (Bailey et al., 2006; Bailey, Hebbeler, Olmstead, Raspa, & Bruder, 2008; Bruder, 2010), wherein the strengths of the child's family are valued and capitalized upon (King, King, Rosenbaum & Goffin, 1999; Trivette & Dunst, 2005). This is important as families of children with disabilities serve as the long-term caregivers and their main resource. Moreover, as families of children with disabilities interact with the health care system frequently (Goin-Kochel, Mackintosh, & Myers, 2006), they are especially vulnerable to the accretion of poor interactions (Moh & Magiati, 2012; Siklos & Kerns, 2007).

Sameroff (2009) who researched effectively ECI practices reported that interventions focused on the caregiver and child produced longer lasting gains than interventions that focused on the child only. Recent literature reviews and meta-analyses of research across a wide range of early intervention service sectors have examined the extent to which family centered

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practices are related to wide variety of outcomes, such as more efficient use of services, greater family satisfaction with services, family well-being, parenting practices, and improved health or developmental outcomes for children (Dunst, Trivette & Hamby, 2006; Enriquez & McBroom, 2009; Piotrowski, Talavera, & Mayer, 2009). Dunst, Trivette and Hamby (2007) in another recent meta-analysis comprising 47 different studies, found family centered practice to be associated with stronger family beliefs of self-efficacy and sense of control, as well as greater perceptions of helpfulness of program services. These studies consistently show that family centered practices have positive effects in a diverse array of child and family domains. Notably, all studies cited share a focus in collaborating with caregivers to develop functional outcomes.

Bailey and colleagues (2006) highlighted several reasons for the measurement of family outcomes in ECI. At a practical level, it makes sense to measure family outcomes as they are generally linked with child goals in ECI programs. More importantly, families play critical roles in their child's development and need to be supported in this process. Conversely, when family members themselves are affected by having a child with a disability, services ought to promote positive adaptation and reduce potential negative impacts. These interactions over time shape the children's developmental trajectory, with prior experiences influencing the next course of actions. It is essential to document this crucial aspect. Finally, documenting parent and family outcomes might be especially important for families whose children might have serious health and developmental challenges and hence make relatively little developmental progress.

1.2. Measuring family centered practices and outcomes

In order to promote family centered interventions, conceptual and methodological challenges must be addressed, such as documenting change as a result of the services received. Tools that can accomplish these goals will make it possible to both evaluate services and relate parents' perceptions to their satisfaction with services and the impact of services on their children's developmental outcomes. There is, thus, a need for programs serving these children and their families to develop practices that are valued and useful to families (Trivette & Dunst, 2005). Family outcomes need to be assessed and monitored as an outcome of ECI (Bailey et al., 2008). A number of instruments have been developed to measure different aspects of family service provision in ECI. For instance, the Family Needs Survey (FNS; Bailey & Simeonsson, 1988) and Family Needs Scale (Dunst, Cooper, Weeldreyer, Snyder & Chase, 1988) measures the needs of families of children with disabilities. Likewise, the Family Quality of Life Scale (FQOL; Hoffman, Marquis, Poston, Summers, & Turnbull, 2006) provides a means of measuring family quality of life among young children with disabilities. Bailey and colleagues (2006) developed the Family Outcomes Survey (FOS, Bailey, Hebbeler, & Bruder, 2006) employing a literature review, stakeholder feedback, and psychometric evaluation. Although these measures appear to be measuring related aspects, their relationship remains unclear. Epley, Summers, and Turnbull (2011) recently investigated the relationship between the provision of family centered ECI services, family quality of life, and family outcomes and reported that family outcomes mediated the relationship between ECI services and family quality of life. Despite slight differences in the focus and perspective of various authors, there is considerable overlap in what is being defined and documented as family outcomes. No formal work was done in reaching a consensus about a common core of family outcomes until Bailey (2001) called for a national forum to reach agreement on a common core of family outcomes for ECI. Attempts to answer questions of how ECI programs benefit the families being served raises a wide range of evaluation issues centered on two main concerns: (a) what are the expected family outcomes; (b) how should those outcomes be assessed. In an effort to answer those questions, Bailey et al. (2011) synthesized existing frameworks (e.g., Brooks-Gunn, Berlin, & Fuligni, 2000; Turnbull, Turbiville, & Turnbull, 2000) and through a bottom-up iterative process of consultation with national stakeholders, policymakers, service providers, researchers of ECI and families of children with disabilities, developed five broad evidence-based family outcomes (see, Bailey et al., 2006, 2011) measured via the Family Outcomes Survey-Revised (FOS-R; Bailey et al., 2011).

1.3. Applying measures across contexts: the case of Singapore

Although instruments such as the FNS, FQOL, and FOS-R have contributed significantly to the understanding of families in early intervention, these instruments are developed in the context of the United States. The extent to which these instruments may be employed in another country needs to be investigated. Both belief systems as well as the context of support of individuals with disabilities and their families likely differ across countries (Ghosh & Magaña, 2009). The potential impact of cultural context on family perceptions necessitates an examination of the applicability of these instruments in other settings.

Singapore is one of the most economically developed cities in Southeast Asia. It is also becoming an increasingly diverse society blending cultures from Asia and the west. Chinese constitute the ethnic majority in Singapore, but Malay and Indian ethnic groups also form a significant proportion of the population. Due to the educational policy of the nation, most of the population in Singapore speaks some English. Recent studies of parental expectations indicate that unlike other contexts, parents of adolescents with autism spectrum disorders expect their child to stay in the family home until a period when they are unable to care for them (Poon, 2013).

Apart from cultural differences highlighted earlier, two other demographic trends impact upon the practices in Singapore which merit consideration. First the small size of Singapore makes extended family members more available. In addition, there is an availability of low-cost live-in domestic helpers (typically from the Philippines, Indonesia, or India). As such, it is