

Measuring Mother and Father Engagement among Early Intervention Families

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Abstract

Parents of young children with disabilities engage with their children in ways that are simultaneously similar to and distinct from parents of children without disabilities. This study examined the measurement equivalence of a self-report scale of parental engagement piloted among parents of children receiving early intervention services. The survey included generic as well as unique elements of parental involvement. Exploratory factor analyses demonstrated a unidimensional structure for both mothers and fathers. Dyadic confirmatory factor analysis provided evidence of configural and metric equivalence. These results indicate that mothering and fathering can successfully be examined using the same measure of parental engagement.

Introduction

Parenting scholars who study mother-father dyads grapple with which mothering and fathering behaviors can be considered similar or distinct in their expression and in their effects on children (Adamsons & Buehler, 2007). Though some have posited that mothering and fathering behaviors are more similar than they are unique (Fagan et al., 2014), others have suggested the opposite, specifically cautioning against using the same measures of parenting for mothers and fathers (Palkovitz et al., 2014). Between these competing perspectives, others have urged the continued study of mothering and fathering within the same analyses in order to clarify how mothers and fathers may or may not differ in the parenting (Stolz et al., 2005). Despite the attention to these issues within the broader parenting and family science literature, the equivalence of mothering and fathering has not been investigated among early intervention families.

Methods

- One thousand families from a state-wide early intervention program were invited to participate using a probability proportionate to size sampling method.
- The final sample included 430 mothers, 137 fathers, and 132 intact dyads.
- Data were collected using self-report and third-party (service coordinator) report methods, including surveys and open-ended questions.

Parental Engagement– Nine items assessed engagement on a scale of 0 (*rarely/never*) to 3 (*daily/almost daily*). Seven of the items were adapted from a measure of father involvement used by Bruce and Fox (1999). Five additional items were developed and piloted for this study examining general forms of engagement as well as forms of engagement specific to raising a child with a disability. Cronbach’s alpha for the nine items was .81 for mothers and .88 for fathers.

Aims/Goals

Exploratory factor analysis (EFA) and dyadic confirmatory factor analysis (CFA) provide a useful platform for examining the equivalence of measures of parental engagement between mothers and fathers (Dyer, 2015). The purpose of this analysis was to examine the factor structure and subsequent measurement equivalence of a measure of parental engagement designed to be used among parents of young children with disabilities.

Results – Exploratory Factor Analysis

Table 1. Geomin Rotated Standardized Loadings and Eigenvalues from Exploratory Factor

Analysis of Parental Engagement Measure for Mother-Father Dyads (n = 131)

| Item | Mothers | Fathers |
|--|---------|---------|
| I spend time one-on-one with my child | .70 | .84 |
| My child(ren) and I play together | .93 | .98 |
| I join in activities my child(ren) like(s) at home | .98 | .95 |
| I teach my child(ren) new skills | .70 | .80 |
| I take my child(ren) to places (e.g. the mall, restaurants, and parks) and activities (e.g. soccer, swimming, and camping) | .46 | .75 |
| I help my child(ren) prepare of the day's activities (e.g. getting dressed and feeding) | .76 | .73 |
| I help my child(ren) prepare for bedtime | .90 | .80 |
| I attend my child's therapy sessions | .56 | .60 |
| I put into practice at home the recommendations of my child's therapists | .76 | .58 |
| Eigenvalues for single-factor solution | 5.32 | 5.83 |

Note: Mother engagement fit indices: CFI = .98; TLI = .97; RMSEA = .07; $\chi^2(27) = 46.67, p < .05$; $\chi^2/df = 1.73$. Father engagement fit indices: CFI = .99; TLI = .99; RMSEA = .08; $\chi^2(27) = 51.66, p < .01$; $\chi^2/df = 1.91$. All loadings were significant at the $p < .05$ level

Results – Dyadic CFA

Table 2. Unstandardized Loadings (Standard Errors) and Standardized Loadings for Single-Factor

Confirmatory Model of Parental Engagement for Mother-Father Dyads (n = 131)

| Item | Mothers | | Fathers | |
|--|----------------|--------------|----------------|--------------|
| | Unstandardized | Standardized | Unstandardized | Standardized |
| I spend time one-on-one with my child | 1.0 (–) | .70 | 1.0 (–) | .84 |
| My child(ren) and I play together | 1.31 (.13) | .92 | 1.17 (.06) | .98 |
| I join in activities my child(ren) like(s) at home | 1.38 (.14) | .98 | 1.13 (.05) | .95 |
| I teach my child(ren) new skills | 1.06 (.12) | .75 | .96 (.06) | .81 |
| I take my child(ren) to places (e.g. the mall, restaurants, and parks) and activities (e.g. soccer, swimming, and camping) | .71 (.12) | .50 | .89 (.07) | .74 |
| I help my child(ren) prepare of the day's activities (e.g. getting dressed and feeding) | 1.07 (.17) | .75 | .87 (.07) | .73 |
| I help my child(ren) prepare for bedtime | 1.25 (.15) | .88 | .96 (.06) | .80 |
| I attend my child's therapy sessions | .73 (.13) | .51 | .69 (.08) | .58 |
| I put into practice at home the recommendations of my child's therapists | 1.07 (.11) | .75 | .69 (.10) | .58 |

Note: Dashes (–) indicate the standard error was not estimated. CFI = .98; TLI = .98; RMSEA = .05; $\chi^2(134) = 179.17, p < .01$; $\chi^2/df = 1.34$. The correlation between the latent variables was .23 ($p < .05$). All loadings were significant at the $p < .001$ level

Results

Mother and Father Engagement EFA

- The factorability of the nine items measuring parental engagement was examined separately for mothers and fathers using EFA. A single-factor solution provided the best representation of the data (see Table 1).

Mother and Father Engagement Dyadic CFA

- All paths were estimated freely, with the first item fixed to 1. Because all standardized factor loadings loaded above .40 and were significant at the $p < .001$ level, the measure of parental engagement was determined to demonstrate configural equivalence between mothers and fathers (see Table 2).
- Although the measure of parental engagement could not be determined to demonstrate metric equivalence on the strict basis of the Wald test of parameter constraints [(df = 9) 20.59, $p < .05$], these differences were assumed to be small based on the lack of change in model fit indices.

Implications

Policy and Practice

- Service providers can use the knowledge from this study when working with families such that equal emphasis is made on encouraging similar types and frequency of engagement from fathers as is encouraged from mothers (Adams & Tapia, 2013).

Future Research

- Mothers and fathers raising infants and toddlers with disabilities demonstrate similar patterns of engagement with their children, supporting the perspective of Fagan et al. (2014).
- Few studies have utilized dyadic data analysis techniques with this population, highlighting a need for future studies using these approaches.

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