



A multidimensional examination of New Zealand family involvement in education

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Abstract

The purpose of this study was to preliminarily examine family involvement with the primary caregivers of a specific population of New Zealand primary school students through a pilot validation of a New Zealand version of the Family Involvement Questionnaire, Elementary Version (FIQ-E; Manz, Fantuzzo, & Power, 2004). Participants were 285 primary caregivers of children attending primary school in Dunedin, New Zealand. Confirmatory and exploratory factor analyses were conducted to determine the factor structure of the New Zealand version of the FIQ-E. Exploratory factor analysis revealed a factor structure similar to the original FIQ-E; however, fewer and different items loaded onto the common factors. Implications for these findings, including differences in the factor structure and intercultural family involvement research, are explored.

Keywords

education, family involvement, New Zealand

Family-school partnerships, or the degree to which families and schools share and defer to each other's experiences and expertise, have emerged as a critical factor in understanding children's healthy academic and socio-emotional development (Turnbull, Turnbull, Erwin, & Soodak, 2006). Moreover, families and school personnel share the responsibility for socializing and educating children

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(Adams & Christenson, 2000; Conoley, 1987). A partnership-centered perspective emphasizes that families and school personnel are essential contributors to children's learning and social development, each with their own unique perspectives and knowledge (Christenson & Sheridan, 2001).

Gaining insight into a family's role in education, or family involvement, may be a critical first step in beginning to discern dynamics within family-school partnerships. Family educational involvement has been examined empirically, and positive associations between parental involvement and important outcomes are evident (Jeynes, 2005). However, effectively measuring family educational involvement is complex due in part to its multidimensional nature (Epstein, 1995; Fantuzzo, Tighe, & Childs, 2000; Kohl, Lengua, & McMahon, 2000; Manz, Fantuzzo, & Power, 2004). Thus, when considering the ways in which families and schools interact on behalf of their children, it is critical to use a careful, measured approach.

Among the varied ways families are involved in their children's educational lives, three specific types of family involvement have emerged as empirical constructs that specify certain kinds of involvement behaviours (Fantuzzo et al., 2000; Manz et al., 2004). These three constructs are: school-based involvement, home-based learning, and home-school communication (Manz et al., 2004). These constructs of family involvement are likely present in many cultures, but may be operationalized differently, and/or occur in different forms or at various frequencies.

Although countries around the world may operate under very different political and economic climates, a common theme in many countries is community support for adaptive child development. The international policy-making community and individual countries call on families and schools to work together to promote the healthy development of children. The 1989 Children Act (United Nations, 1989) aligned child and parent perspectives by indicating that both units (i.e. parent and child) have the right to express their individual views and for those views to be taken seriously. The World Health Organization (WHO) calls on families and schools to work together in helping children prevent addiction to harmful substances (WHO, 1999).

Although there has been substantial research *within* specific contexts investigating the family-school relationship, there is a dearth of work investigating the family-school relationship *across* contexts. To date, the majority of empirical work investigating family-school partnerships, and family involvement has been conducted in single contexts; however, researchers have called for specific models of parent involvement in education to be empirically assessed across a range of cultures (e.g. Walker, Wilkins, Dallaire, Sandler, & Hoover-Dempsey, 2005). Moreover, a framework for investigating components of family-school partnerships in the international community does not exist.

One explanation for the lack of work investigating family-school partnerships across countries may be that educational systems have traditionally been viewed as country or culture specific, thereby leading researchers and practitioners to adopt

an ethnocentric perspective. However, there are important educational connections, and investigating these connections allows for evaluating models (e.g. of parent involvement) across cultures. In fact, evaluations of educationally relevant topics have been assessed across cultures in the international community (e.g. Akande, 1997; Carey & Bourbon, 2005). A cross-cultural study conducted in the United States found evidence of differences in the types of involvement activities in which parents are engaged across cultures (Huntsinger & Jose, 2009). One important educational connection that exists in the international community, which has received little attention with regard to family-school partnerships, is between the United States (US) and New Zealand.

There are many similarities, and some slight differences in the ways family-school partnerships are conceptualized and practiced in the US and New Zealand. Specifically, legislation, national goals and blueprints for training educational and school psychologists in collaboration and family-school partnerships are similar in the two countries (Annan, Ryba, Mentis, Bowler, & Edwards, 2004; No Child Left Behind Act, 2002; New Zealand Ministry of Education, 2008; US Department of Education, 2010; Ysseldyke et al., 2006). In addition, there are research-supported calls for collaborative interactions between school personnel and families in the US and New Zealand. In the US, there is an emphasis on using a partnership orientation in consultation with families and school personnel (Garbacz et al., 2008). Additionally, bidirectional communication has been highlighted as an important element in family-school interactions (Christenson & Sheridan, 2001). Despite calls for collaborative interactions in New Zealand (e.g. Ballard, 1983; Ballard, 1984; Fraser, 2005), an investigation assessing discussions of student achievement across school personnel and families in New Zealand did not find evidence of partnership-centered rhetoric (Timperley & Robinson, 2004). The gap between what is indicated in research and observed in practice is not unique to the New Zealand context. Indeed, families remain to be differentially involved in their children's education in the US. Reasons some families are more involved than others are complex, and can be explained by many factors (e.g. interpersonal relationships, self-efficacy beliefs; Green, Walker, Hoover-Dempsey, & Sandler, 2007). Findings in the US, which suggest specific reasons for differential patterns of family involvement, may or may not be true for families in New Zealand.

The nature of family involvement has also been investigated in both the US and New Zealand. In the US, there is an empirical evidence base that indicates families and school personnel working together on behalf of children may negate the effects of certain demographic characteristics and is associated with outcomes (e.g. Dearing, Kreider, Simpkins, & Weiss, 2006; Fantuzzo, McWayne, Perry, & Childs, 2004). Similarly, in New Zealand, evidence appears to reveal the importance of family involvement for child outcomes (Fletcher, Greenwood, & Parkhill, 2009). In addition, findings in New Zealand have uncovered practices teachers and principals use to engage families (Struthers & Schaughency, 2010), as well as the importance of strong connections and consistent interactions between families and school personnel (Duncan, Bowden, & Smith, 2006). In the US and New Zealand,

there is a focus on using school-based team approaches to support education (Annan, Bowler, Mentis, & Phillipson, 2008; Horner et al., 2009), which in many cases include a variety of individuals from differing backgrounds; however, parent members on school boards of trustees in New Zealand is somewhat different than what is found on school-based teams in the US.

Although there have been investigations studying family-school partnerships, and components thereof in the US and New Zealand, no empirical investigations have sought to systematically compare perceptions of family involvement behaviours across countries. Moreover, the empirical work conducted in New Zealand examining components of the family-school partnership has focused primarily on qualitative assessments of parent-teacher relationships and parent involvement in their children's education. Thus, there appears to be no psychometrically valid measurement tool that can effectively assess the multidimensional characteristics of educationally relevant family involvement behaviours. Before systematic comparisons of family involvement can be made across countries (e.g. the US and New Zealand), an empirically-based, culturally valid, multidimensional assessment tool must be available for use with families in New Zealand.

Fantuzzo et al. (2000) demonstrated empirical support for a multidimensional conceptualization of family involvement for families of young children in the US using the Family Involvement Questionnaire for Early Childhood (FIQ-EC). Manz and colleagues (2004) modified the FIQ-EC for use with families of elementary age children (FIQ-E) in the US. Factor analytic work with these instruments has yielded three constructs, or domains of family involvement: school-based involvement, home-based involvement, and home-school communication (i.e. on the FIQ-E) or conferencing (i.e. on the FIQ-EC).

To understand the relative effect of New Zealand family involvement, and to make international family involvement comparisons possible, it is first necessary to have a psychometrically sound measurement tool that effectively assesses family-involvement, based on empirically-derived constructs. This approach will also provide a preliminary understanding of perceptions, strengths, and needs of families in New Zealand.

The purpose of this study was to preliminarily examine family involvement with the primary caregivers of New Zealand primary school students through a pilot validation of a New Zealand version of the FIQ-E (Manz et al., 2004). In addition, key family demographic information was examined descriptively. Specifically, the research questions examined in this study were (1) What is the structural validity of the FIQ-E for a specific sample of families of New Zealand primary school students (i.e. primary caregivers) in school year 1 through year 6? (2) What are the psychometric properties of the FIQ-E for a specific sample of families of New Zealand primary school students (i.e. primary caregivers) in school year 1 through year 6? A confirmatory factor analysis was used to answer the first research question. The structural validity of the FIQ-E for a specific sample of New Zealand families was investigated across the three latent constructs identified in the development of the FIQ-E in the United States (i.e. Manz et al., 2004). An exploratory factor

analysis was conducted on the New Zealand FIQ-E to answer the second research question.

Method

Participants and setting

Participants in this investigation were the primary caregivers of 285 primary school age children in three primary schools in a moderately-sized city in Southern New Zealand. An optimal sample size of 400 participants was recruited, with a minimally acceptable sample of 250 to 300 to conduct the confirmatory and/or exploratory factor analysis (Hair, Anderson, Tathan, & Black, 1998; Tabachnick & Fidell, 2001).

Seventy-eight percent of participants in this study were New Zealand European, 5% were Maori, 9% were multi-racial, and approximately 8% indicated an 'other' category. Eighty-six percent of caregivers were mothers, 11% were fathers, and the remainders were grandparents or other extended family members. The average respondent was 38 years of age. The number of adults living in the home ranged from one to four with an average of 1.84 ($SD = 0.54$). There was a range of one to five children under the age of 18 living in the home ($M = 2.14$, $SD = 0.86$). Thirty-eight percent of respondents indicated that they completed 'some high school,' 23% indicated they received 'post secondary' training, and 24% indicated they had a 'university degree.'

At each of the three primary schools, survey packets were sent home with the eldest child from each family, which included 711 caregivers. Two hundred eighty-five responses were received, indicating a 40% response rate. Five surveys included missing data; those data were modeled in the analysis using Maximum Likelihood Estimation (Jamshidian & Bentler, 1999). The response rates across the three school sites differed. At school 1, the response rate was 57%; at School 2 the response rate was 28%; and at School 3 the response rate was 45%. These percentages were calculated by dividing the number of caregivers who participated at each school by the total number of eldest children attending each school (i.e. the total number of surveys sent at each school). The differences in response rates across schools could be due to administrative support, family interest, and/or opportunities for the primary investigator to interface with families.

Measures

Family Involvement Questionnaire—Elementary Version. Primary caregivers' involvement in their children's education was measured using the FIQ-E (Manz et al., 2004). The FIQ-E is a multidimensional family involvement tool that has been demonstrated as a reliable and internally consistent measure of family involvement in the US. The FIQ-E was adapted for use with primary/elementary age children from the FIQ-EC (Fantuzzo et al., 2000) using a multi-step process

including focus groups and a review of the family involvement literature to ensure developmentally and culturally appropriate items were selected (Manz et al., 2004).

The FIQ-E is a 46-item self-report measure rated on a four-point Likert-type scale, with 1 indicating that the family involvement behaviour or activity occurs *rarely*, and a 4 indicating that it *always* occurs. The dimensions of involvement that are measured by the FIQ-E are: school-based involvement, home-based involvement, and home-school communication. The FIQ-E was adapted for use in New Zealand using a thorough, yet minimally invasive process, using procedures described below.

Demographic questionnaire. Demographic family and child variables were collected to gain an understanding of the sample used in this investigation. Specifically, items assessed household composition, caregiver age, education, and relationship to the child as well as child age and grade. Items were adapted for use in New Zealand using item level demographic categories and response choices partially based on those used in the New Zealand Census (New Zealand Census, 2001). To further assess cultural validity for the specific New Zealand context used in this study, items were reviewed by two individuals currently residing in New Zealand (i.e. the same individuals who reviewed the FIQ-E, described in detail below).

Procedures

Adaptation of the FIQ-E. Although the data analyses for this investigation (i.e. confirmatory factor analysis) necessitated the FIQ-E used in New Zealand to remain as similar as possible with the original FIQ-E (Manz et al., 2004), some modifications to the FIQ-E were necessary to account for the cultural differences in New Zealand. The meaning of every item on the FIQ-E remained intact, but some words were changed to ensure the grammatical structure was consistent with core components of the New Zealand language. Two individuals currently residing in New Zealand reviewed the FIQ-E and suggested slight modifications with regard to word choice on select items (e.g. the use of the word 'interviews' rather than 'conferences')¹ The first reviewer was a faculty member at a local university, and the second reviewer was a native New Zealand English speaking parent of school-aged children. The result of this procedure produced the Family Involvement Questionnaire-New Zealand version (FIQ-NZ).

Data collection. The FIQ-NZ and demographic form were administered to all participants during the same three-week period. Measures were sent to all primary caregivers at each school in the eldest or only child's weekly school folder. Included with the measures was an information sheet for parents/guardians from the primary investigator, consent materials, a letter from the school principal, and a postage-paid envelope for returning the completed materials to the primary investigator.

Instructions for caregivers. Information was provided to caregivers with regard to the aim of the project, requirements of participation, instructions for withdrawing participation, use of collected information, and instructions for whom to contact with questions. Approval from the partner university's Human Ethics Committee was also indicated. When completing these measures caregivers were asked to consider their eldest or only child. Caregivers also received a small token of appreciation (i.e. an adhesive pad of paper), which they could keep regardless of whether they chose to participate.

Modes of participation. Caregivers could participate in the project via three modes. Specifically, participants were provided the option to return the demographic questionnaire and family involvement measure to the primary investigator (1) by mail, (2) through an online survey program, or (3) at individual school sites. These modes of participation are commonly accepted procedures in the field of survey methodology (Groves et al., 2004). The vast majority of respondents used the mail option, with only three measures completed at the school sites and two via the online survey.

Data entry. The FIQ-NZ and family demographic data from web-based and paper surveys were entered into a project database and stored in a locked file cabinet. Reliability was computed for 27% of double-entered data. Reliability calculations indicated 98.7% of the double-entered data were accurate, and yielded a Cohen's Kappa of 0.985.

Results

Results for the aforementioned analyses are described in the following section. Confirmatory factor analysis and exploratory factor analysis are included.

Confirmatory factor analysis

A confirmatory factor analysis (CFA) was conducted to determine the structural validity of the FIQ-E for New Zealand families across the three latent constructs identified in the development of the FIQ-E in the United States (Manz et al., 2004). Two confirmatory factor analyses were conducted using EQS 6.1 (Bentler, 2005), which provides several indices to evaluate the goodness-of-fit between the specified model and data set. The first CFA was implemented unaltered; the second CFA was implemented to account for missing data (Jamshidian & Bentler, 1999) and non-normal data (Yuan & Bentler, 2000). In addition, the error terms for two items with conceptual similarity were correlated. The unaltered CFA and the modified CFA indicated that the three-factor FIQ-E factor structure is not applicable to the context specific New Zealand sample (i.e. FIQ-NZ) based on research-supported goodness-of-fit indices (Bentler, 1992; Fabrigar, Webener, MacCallum, & Strahan, 1999; Hu & Bentler, 1999).

Exploratory factor analysis

Exploratory factor analyses were conducted to identify latent constructs for the FIQ-NZ, and were based on previous work conducted with the FIQ-E (Manz et al., 2004). Factor structures were evaluated according to a variety of standard criteria (McDermott, 1993): (a) eigenvalues of the unrotated factors are greater than or equal to 1; (b) the rotated factor solution meets criteria for Catell's (1966) scree test; (c) each factor accounts for greater than 5% of the total variance; (d) each factor demonstrates adequate internal consistency, with alpha coefficients > 0.70 ; (e) the final factor solution minimizes intercorrelation of retained factors and items with appreciable loadings on more than one factor; and (f) the proposed factor solution is psychologically meaningful and consistent with existing theoretical models.

A three-factor solution was supported by the exploratory factor analysis. The following dimensions related to family involvement were produced across 30 items: school-based involvement, home-school communication, and home-based involvement. The internal consistency of each factor was high, with Cronbach's alpha coefficients (Cronbach, 1951) of 0.83, 0.86, and 0.76, respectively. Inter-factor correlations, ranging from 0.37 to 0.47 were acceptable, indicating that factors reflected distinct but related family involvement constructs. In total the three factors account for 32% of the variance, with the school-based involvement factor accounting for 19%, the home-school communication factor accounting for 7% and the home-based involvement factor accounting for 6%.

The item content and factor loadings are presented in Table 1. The school-based involvement factor was comprised of ten items and included activities that take place in the school setting, such as volunteering, participating in social activities, and attending family social activities at the school. The home-school communication factor consisted of ten items pertaining to various forms of contact caregivers might have with school personnel, including talking to the teacher about difficulties at school and accomplishments, and contacting the principal. The home-based involvement factor was comprised of ten items and included activities conducted by caregivers outside of school that promote learning, such as doing creative activities, reading, and helping their child with homework. There were 30 items included on the FIQ-NZ across the three factors.

Congruence with FIQ-E factor structure

Although the confirmatory factor analysis indicated the factor structure of the FIQ-E was not applicable to the FIQ-NZ, results of the exploratory factor analysis revealed two primary similarities and two notable differences. First, the three latent constructs measured on the FIQ-NZ (i.e. school-based involvement, home-based involvement, home-school communication) are highly similar to those measured on the FIQ-E. Second, the items that load onto the three constructs share a large degree of overlap. In fact, all but one of the items on the FIQ-NZ load onto the

Table 1. Exploratory factor analysis structure for the FIQ-New Zealand

Structure	Varimax loadings
<i>Factor 1: School-based involvement</i>	
Participate in parent and family social activities at school	0.76
Attend organized family-school associations at school	0.67
Attend parent workshops or training offered by school	0.59
Go on class trips with my child	0.55
Talk with other parents about school meetings and events	0.55
Participate in fundraising activities at my child's school	0.54
Volunteer in my child's classroom	0.52
Take my child to the public library	0.43
Arrange times at home when my child's classmates can come and play	0.39
Meet with other families from my child's classroom outside of school	0.39
<i>Factor 2: Home-school communication</i>	
Talk to the teacher about my child's accomplishments	0.69
Talk to my child's teacher about his/her difficulties at school	0.68
Talk to teacher about how my child gets along with his/her classmates	0.68
Contact the teacher or principal to get information	0.63
Talk to my child's teacher about his/her daily school routine	0.61
Call teacher if concerned about things my child tells me about school	0.60
Talk with my child's teacher or principal about disciplinary problems	0.53
Talk with teacher about work child should practice at home	0.53
Talk to my child's teacher about the classroom rules	0.50
Talk to teacher about personal matters if relevant to school	0.43
<i>Factor 3: Home-based involvement</i>	
Read with my child	0.56
Do creative activities with my child	0.55
Spend time with my child working on math skills	0.53
Help my child with homework	0.49
Check that my child has a place at home where school materials are kept	0.46
Bring home learning materials for my child	0.46
Take my child to places in the community to learn special things	0.44
Talk to my child about how school has helped me	0.42
Review my child's schoolwork	0.41
Praise my child for his/her schoolwork in front of the teacher	0.40

Table 2. Items included in the FIQ-E factor structure that did not load onto any factor of the FIQ-NZ

Items
Attend interviews with the teacher to talk about my child's learning or behaviour
Limit TV and video watching
Suggest classroom activities and school trips
Take my child to school in the morning
Keep a regular morning and bedtime schedule
Share stories with my child about when I was in school
Maintain clear rules at home
Ask my child how his or her day was at school
Pick my child up from school in the afternoon
Talk with people at my child's school about career development
My child has chores to do at home
Parents in my child's school support each other
Talk with my child's teacher on the telephone

same constructs as they did on the FIQ-E; however, 13 items that loaded onto the latent constructs of the FIQ-E did not load onto any constructs on the FIQ-NZ. The 13 items that did not load onto any latent constructs of the FIQ-NZ are in Table 2. In addition, the school-based involvement factor accounted for the least variance on the FIQ-E and the most variance on the FIQ-NZ.

Discussion

The purpose of this study was to preliminarily examine family involvement with the primary caregivers of a specific population of New Zealand primary school students through a pilot validation of a New Zealand version of the FIQ-E (Manz et al., 2004). Results from the factor analyses revealed relatively mixed patterns of family involvement. Moreover, these results produced interesting preliminary implications for assessing intercultural family involvement.

Findings

Confirmatory factor analysis using the FIML and Yuan-Bentler (Allison, 2003; Yuan & Bentler, 2000) approaches with the FIQ-NZ did not support the identical three-factor model indicated by the FIQ-E. This may be due to differences between the current sample and the original FIQ-E sample. Specifically, the psychometric properties of the FIQ-E were based on an urban, largely African American sample of caregivers in the United States. The current sample included largely New Zealand European caregivers in a moderately-sized city in Southern New Zealand.

In addition, results from the exploratory analysis of the FIQ-E yielded a robust three-factor model with constructs that are the same conceptually to the FIQ-NZ. Despite the similarities, however, some items of the FIQ-E did not load onto any of the factors, two items loaded onto two factors, and other items had factor loadings of 0.35. Thus, the factor structure reported for the FIQ-E may not have been strong enough to successfully reproduce with the relatively small and demographically different sample in New Zealand. Specifically, some items that loaded onto one of the three FIQ-E family involvement factors did not load appreciably on a factor of the FIQ-NZ. This may represent fundamental differences between responses across the two samples at the item activity level despite the fact that general forms of involvement are similar. Examples include: 'I take my child to school in the morning'; 'I attend interviews with the teacher to talk about my child's learning or behaviour'; 'I talk with my child's teacher on the telephone'; and 'I limit my child's TV and video watching.' Moreover, the items 'I take my child to school in the morning' and 'I pick my child up from school in the afternoon' produced correlated error terms with the confirmatory factor analysis, which indicates these items are not sensitive or meaningful in the New Zealand context. Moreover, these trends do not specifically indicate how many caregivers are taking their children to school, but do reveal important differences that may be affecting how these items load onto the factors and their relative meaning (or lack thereof) in each country.

Modifications to the FIQ-E were made to account for the cultural differences in New Zealand when creating the FIQ-NZ. Exploratory factor analysis for the FIQ-NZ produced a three-factor solution that revealed similar dimensions of family involvement as were indicated for the FIQ-E. The theoretical and empirical components of multidimensional family involvement were supported by the exploratory factor analysis. Nevertheless, there are somewhat different activities demonstrated by parents in New Zealand within and across the three dimensions of involvement. Further, items load appreciably onto three factors of the FIQ-NZ, which differs from the 43 items that load appreciably onto a similar three-factor model for a US sample. There may be items not included on the FIQ-NZ that represent dimensions of family involvement in New Zealand. Because this study used a scale developed and validated in the US, the focus for the items on the FIQ-E is on components of family involvement observed in the US. Thus, the FIQ-NZ may be missing important activities that represent dimensions of family involvement in New Zealand.

Implications for practice

Research of the kind described herein has implications for intercultural researchers and educators, families, and psychologists in New Zealand, as well as families, educators, and psychologists in other countries around the world. It also provides insight into how multidimensional family involvement can be measured across countries. The mis-specification of the factor structure of the FIQ-E to the sample of caregivers in New Zealand elucidates possible differences that exist

across the two countries and informs cross-contextual work. This indicates the importance of carefully considering differences across contexts when attempting to generalize measures; including specifying how such measures might function in those contexts.

The exploratory factor analysis of the FIQ-NZ revealed a three-factor model very similar to the one produced with the FIQ-E. The differences in item loadings across the FIQ-E and FIQ-NZ may be representative of differences in family educational involvement in the US and New Zealand. By removing specific items from the model for the FIQ-NZ, a more generalizable factor structure may have been created. Due to the pilot nature of this work, future research is necessary to determine the generalizability of the FIQ-NZ factor structure in other contexts in and outside New Zealand, thereby allowing cross-contextual studies using the scale.

The exploratory factor analysis also has unique implications for families and educators in New Zealand. For the first time a multidimensional measure of family involvement is available in New Zealand. Investigations in New Zealand assessing family involvement in education have provided valuable information for how families and school personnel interact on behalf of children (e.g. Fletcher, Greenwood, & Parkhill, 2010; Timperley & Robinson, 2004). The FIQ-NZ provides a psychometrically sound tool for quantitatively evaluating family involvement in education. In addition to the descriptive information that can be provided, the nature of the FIQ-NZ (i.e. the three-factor structure) allows for intervention efforts to be targeted. Interventions can be developed to target activities on the various family involvement factors. In this way, the FIQ-NZ has the potential to positively affect how families and educators work together, which can have implications for healthy child development, positive family functioning, and adaptive family-school relationships.

Limitations and future directions

There are several limitations that must be considered when interpreting the present results. Given the pilot nature of this work, interpretation of findings must be considered preliminary. The variable response rate at each school further limits generalizability. Replication studies should include larger samples of caregivers to decrease the chance of mis-specifying fit indices and producing non-normal data. Replication should also focus on investigating the properties of the FIQ-NZ with samples of caregivers in other areas of New Zealand, including rural and urban areas on the North and South islands and better represent families of indigenous Māori background.

Although the FIQ-NZ incorporates a multidimensional conceptualization of family involvement, there may be other dimensions important to the families of various cultural backgrounds in New Zealand that are not measured by the FIQ-NZ. For example, families in New Zealand, especially from ethnic minority groups (e.g. Māori, Pacific Island cultures), may engage in community involvement where families gather to support one another in socio-emotional, vocational, and educational endeavors, which may be conceptually similar to homework centres and/or

school-community liaisons discussed in the literature (Fusitu'A & Coxon, 1998; Hindmarsh, Hohepa, & Murphy, 1995). This type of involvement may not be captured in the FIQ-NZ, and could be helpful to more thoroughly understand family educational involvement in New Zealand.

A quantitative, survey approach was employed in this study. Although the FIQ-NZ was modified from the FIQ-E based on reviews and discussions with individuals residing in New Zealand, it may have been helpful to conduct cognitive interviews with a subset of families included in this study to determine if other items may have been missing, or whether other modifications to the FIQ-NZ should have been made. These interviews could also suggest specific conceptualizations of family involvement in New Zealand, which could inform more accurate assessments.

Note

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