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**FACTOR STRUCTURE OF THE PARENTING SENSE OF COMPETENCE
SCALE USING A NORMATIVE SAMPLE.**

(Short title: PARENTING SENSE OF COMPETENCE)

Linda Gilmore, PhD
Senior Lecturer
School of Learning and Professional Studies
Queensland University of Technology
Brisbane, Australia
Phone: +61 7 3138 9617
Email: l.gilmore@qut.edu.au

and

Monica Cuskelly, PhD
Senior Lecturer
School of Education
The University of Queensland
Brisbane, Australia
Phone: +61 7 3365 6481
Email: m.cuskelly@mailbox.uq.edu.au

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Abstract

Background The Parenting Sense of Competence (PSOC) scale is a commonly used measure of parental self-efficacy. Previous investigations of the factor structure of this instrument have been unsatisfactory and there is no adequate normative group against which at-risk groups can be compared.

Methods A non-clinical sample of 586 mothers and 615 fathers completed the PSOC.

Results Factor analysis produced three acceptable factors (Satisfaction, Efficacy, Interest) that accounted for 47.3% and 50.1% of the variance for mothers and fathers, respectively. Mothers reported higher efficacy than fathers, and fathers reported greater satisfaction with the parenting role than did mothers.

Conclusions The PSOC contains three useful factors that reflect satisfaction with the parental role, parenting efficacy and interest in parenting. The paper provides normative data against which at-risk groups can be compared.

Introduction

Parenting self-efficacy has been strongly associated with parenting competence and child developmental outcomes (Coleman & Karraker 1998; Shumow & Lomax 2002; Jones & Prinz 2005). When parents feel confident in their ability to parent, they are likely to use more effective parenting practices which foster positive developmental outcomes for their child. This association may also reflect the effect of positive child outcomes on parental feelings of competence. Parenting self-efficacy appears to represent an important protective factor that mediates the effects of risk factors such as maternal depression and child temperament (Teti & Gelfand 1991; MacPhee et al. 1996; Gondoli & Silverberg 1997) as well as buffering the effects of adversity for families living in disadvantaged circumstances (Elder 1995; Ardel & Eccles 2001; Jones & Prinz 2005). Thus, the promotion of parenting self-efficacy has been an important focus of many parent training programmes (e.g., Pisterman et al. 1992; Miller-Heyl et al. 1998; Sofronoff & Farbotko 2002; Hudson et al. 2003; Peterson et al. 2003).

Given the importance of both identifying at-risk families and evaluating the effectiveness of parenting interventions, it is essential to have a reliable and valid measure of self-efficacy that is accompanied by robust normative data. In a recent review of the role of parental self-efficacy, Jones and Prinz (2005) identified the Parenting Sense of Competence (PSOC) scale (Johnston & Mash 1989) as the most commonly used tool for measuring parental self-efficacy. However, although there have been several investigations of the factor structure of the PSOC, these remain unsatisfactory for reasons that are discussed below. In addition, there is no adequate normative group against which at-risk groups can be compared. The current study thus aimed to establish the factor

structure of the PSOC and to provide normative data using a large, non-clinical sample of mothers and fathers.

Originally developed by Gibaud-Wallston and Wandersman (1978, cited in Johnston & Mash 1989), the PSOC has been used extensively since Johnston and Mash provided an interpretable factor structure. Based on a sample of 297 mothers and 215 fathers of children aged 4 to 9 years, their analysis revealed four factors. However, as two were uninterpretable, they forced a two factor solution that accounted for 36% of the variance. The factors were labelled Satisfaction and Efficacy. Although Johnston and Mash included both mothers and fathers in their analysis, they did not examine the factor structure separately for these two groups. Since it has been established that mothers and fathers experience at least some parenting processes differently (Bretherton et al. 2005; Gamble et al. 2007), it seems important to examine the underlying structure of the PSOC for both sets of parents.

Ohan et al. (2000) addressed this gap by reporting the factor structure for mothers and fathers separately. One hundred and ten couples who had a child between the ages of 5 and 12 years contributed to the study. Unfortunately, these numbers were too small for a confident interpretation (Tabachnick & Fidell 2001). In a second factor analysis using the combined mother-father data, three factors with eigenvalues greater than 1 emerged. However, as the third factor accounted for less than 10% of the variance, a two factor solution was forced. The two factors, Satisfaction and Efficacy, accounted for 41% of the variance.

The problems associated with insufficient sample size inherent in Ohan et al.'s (2000) design were overcome by Rogers and Matthews (2004) who investigated the factor

structure of the PSOC in a large sample of 849 mothers and 329 fathers, including 283 mother-father pairs. The parents had children who were aged between 6 months and 15 years, with a mean of 4.9 years. All had been referred to, or had chosen to undertake, a parent training program. Since parents who participate in such interventions usually do so because of some concern about their child, it could be argued that this group represented a clinical rather than a general community sample. The data are thus of limited value to those interested in a normative comparison.

INSERT TABLE 1 ABOUT HERE

Interestingly, Rogers and Matthews (2004) reported a factor analysis that differed from the other studies mentioned above, as they found three interpretable factors which accounted for 52% and 54% of the variance for mothers and fathers, respectively. Table 1 shows the factor structure and items that loaded on each factor as reported by the three sets of authors. Clearly, there is substantial overlap. There are also, however, some important differences, the most notable of which is the three factor solution chosen by Rogers and Matthews. They identified a factor which they titled Interest as it contained two items related to level of engagement with the parenting role. Both Johnston and Mash (1989) and Ohan et al. (2000) reported finding more than two factors (4 and 3, respectively). However, both sets of authors chose to force a two factor solution and did not report the initial solution. Thus, it is not possible to determine if items 12 and 14 were implicated in these additional factors. On the basis of Johnston and Mash's finding that item 17 did not load on any factor, Rogers and Matthews administered the PSOC questionnaire without this item.

The study reported here was intended to address all the shortcomings of the previous studies: The aim was to establish the factor structure of the PSOC for mothers and fathers separately, using a large non-clinical sample of unrelated females and males, and to include all items in this analysis. As parental education, parental age and children's developmental stage may have some influence on parenting sense of competence, these variables were also examined.

Method

Participants

Twelve hundred and six parents took part in the current study. Five cases were excluded because their questionnaires had two or more missing responses, leaving a total sample of 1,201 participants (586 mothers and 615 fathers). Only one parent per family contributed data, and all participants had one or more children under the age of 18 living at home with them at the time of the study. No exclusion criteria were applied; thus, the sample was taken from the general population without screening for child or parent difficulties. As shown in Table 2, most parents were aged between 31 and 50 years. There was a good distribution across levels of education for both mothers and fathers and the sample was reasonably representative of the Australian population in relation to education, although a higher proportion (31%) had tertiary qualifications than in the general population (20%; Australian Bureau of Statistics 2005). Approximately 25% had been awarded a certificate or diploma (versus 31% in the wider Australian population) and 43% stated that high school was their highest level of educational attainment (compared to 49% in the general population). The majority of participants (82% of

mothers and 92% of fathers) reported that they were currently married or living in a de facto relationship. Respondents had an average of 2.3 children (mode = 2, range = 1-6). Seventy-seven per cent of mothers and 75% of fathers had at least one son, and 76% of mothers and 79% of fathers had at least one daughter.

INSERT TABLE 2 ABOUT HERE

Instrument

The Parenting Sense of Competence (PSOC)(Gibaud-Wallston & Wandersman 1978, cited in Johnston & Mash 1989) is a 17 item scale designed to measure parents' satisfaction with parenting and their self-efficacy in the parenting role. The final item of the scale is often omitted as it did not load on any factor in the analysis reported by Johnston and Mash; however, it was included in the current study because of its contribution to one of the factors in Ohan et al.'s (2000) investigation. PSOC items are appropriately phrased for the parent completing the questionnaire (e.g., *My mother/father was better prepared to be a good mother/father than I am.*). Parents indicate their level of agreement with each item by circling a number between 1 (strongly agree) and 6 (strongly disagree). Eight items (1, 6, 7, 10, 11, 13, 15, 17) are reverse scored so that high scores indicate positive parental experience. Acceptable levels of internal consistency (range .75 - .88) have been reported for the PSOC in a number of studies including Johnston and Mash (1989), Ohan et al. (2000) and Lovejoy, Verda and Hays (1997).

Procedure

As part of the fieldwork requirements for a developmental psychology subject, undergraduate students enrolled in a teacher training degree at a large Australian

university administered the questionnaire to parents using a strict protocol of directions regarding the ethical handling of the data. Each student asked two parents (either two mothers or two fathers) who were known to her/him to complete the PSOC and a separate questionnaire (not reported in the present paper) that assessed knowledge of child development. All respondents were visited at home. They were given an information sheet explaining the purpose of the study (i.e., to gather data about child development and parenting) and providing details of data handling procedures, including their right to refuse to participate or to withdraw at any time. Parents were assured that only the student interviewer and the researchers would have access to their completed questionnaires, that identifying information would be detached, and that only group results would be reported. After gaining informed consent, the students administered the child development questionnaire first, then gave the parent the PSOC questionnaire to complete independently. University ethical clearance was obtained to use completed questionnaires for research purposes in cases where both the parent and the student researcher gave consent.

The PSOC was originally designed to measure parenting self-efficacy in first-time parents of infants. Using the instrument with parents of older children, Johnston and Mash (1989) asked mothers and fathers to respond in relation to a target child in the family. It is unclear whether all subsequent researchers have followed this method since the instructions given to participants are frequently omitted from published study procedures. In Ohan et al.'s (2000) study, researchers nominated a target child in each family, while Coleman and Karraker (2000) included a written instruction for parents to respond in relation to any one child of their choice. It is likely that interventions with

specific groups (e.g., children with problem behaviours or intellectual disability) have asked parents to complete the PSOC in relation to the atypical child, although this fact is rarely stated. Reyome (1995) reported an adapted version of the PSOC to measure general rather than child-specific responses, and Elliott et al. (2002) needed to adapt the instrument for their baseline measurement prior to childbirth.

Because at least 11 of the 17 items on the PSOC reflect general responses to parenting (e.g., *Being a good mother/father is a reward in itself; My mother/father was better prepared to be a good mother/father than I am*) rather than responses that can be related specifically to one child, it was decided in the current study to ask parents to consider their general experiences of parenting, rather than to respond in relation to a target child. The wording of items 2, 10, 11 and 15 was thus changed from “my child” to “my children”.

Results

A principal component analysis with oblique rotation was conducted for mothers (n = 586) and fathers (n = 615) separately. The factor structures (see Table 3) converged quickly for both groups and were very similar. Four components with an eigenvalue greater than one were identified for each parent group. These four factors accounted for 48.3% of the variance for mothers and for 50.6% of the variance for fathers. The first three factors were labelled using the designations given by Rogers and Matthews (2004) - that is, Satisfaction, Efficacy and Interest - as they were considered to be a good reflection of the items making up the respective factors. The fourth factor, comprising only two items, was labelled Control. As item 5 did not load in the same way for mothers

and fathers, and as its loadings were relatively low, it was decided to omit this item from further analyses.

For mothers, the first factor to be extracted was Efficacy, which accounted for 22.7% of the variance. Satisfaction was the second factor extracted and the items on this second factor were all negatively loaded. Satisfaction accounted for 11.3% of the variance. The third factor, Interest, accounted for 8.4% of the variance and Control for 5.8%. For fathers, Satisfaction was the first factor to be extracted, and accounted for 23.8% of the variance. Efficacy was extracted as the second factor, and all items loaded negatively (12.2% of the variance). The third factor was Interest (8.5%), and Control accounted for 6% of the variance.

INSERT TABLE 3 ABOUT HERE

Internal consistencies using Cronbach's alpha were calculated for each of the four subscales for parent groups separately. These were considered to be acceptable for the subscales of Satisfaction (Mothers = .72; Fathers = .76), Efficacy (Mothers = .68; Fathers = .74), and Interest (Mothers = .62; Fathers = .57), but to be inadequate for the subscale labelled Control (Mothers = .44; Fathers = .47). This latter scale was, therefore, omitted from further analyses. Internal consistency of the total scale after items 1, 5 and 7 were removed was .75 for mothers and .79 for fathers. The total variance explained by the three retained factors was 47.3% for mothers and 50.1% for fathers.

Prior to further analyses, missing items were identified and the individual respondent's mean for the relevant subscale was substituted in 14 cases where one question had not been answered. A correlational analysis (see Table 4) showed all three subscales to be

significantly positively correlated for both parent groups; however, the size of the correlations ranged from weak to moderate.

INSERT TABLE 4 ABOUT HERE

A one way MANOVA was conducted, with educational status as the independent variable and scores on the three subscales of the PSOC as the dependent variables. There was a significant multivariate effect, $F(12, 3095) = 4.25, p < .001$; Wilks' Lambda = .958; partial eta squared = .014. Using a Bonferroni adjusted alpha level of .01, the univariate analysis identified Satisfaction as the only subscale on which there was a significant difference, $F(4, 1172) = 6.94, p < .001$; partial eta squared = .023. Satisfaction increased as educational level increased. Parents whose highest educational level was Grade 10 or lower were significantly less satisfied with their parenting ($M = 22.11, SD = 6.04$) than were parents who had a Bachelor's ($M = 24.39, SD = 5.34$) or postgraduate qualification ($M = 24.94, SD = 5.90$), both at $p < .001$. No other comparison based on level of education reached significance.

As a consequence of the results of the factor analysis where the salience of satisfaction and efficacy differed for mothers and fathers, differences between these groups were examined further. A chi square test was initially conducted to ascertain whether there were differences on education. This analysis showed that education levels were significantly different for the two parent groups, Pearson chi square ($4, N = 1177$) = 20.73, $p < .001$. There were more mothers than fathers whose highest education level was Grade 10 or lower, and more fathers than mothers with postgraduate qualifications. Therefore, when mothers' and fathers' scores on the subscales were compared, education

was entered into the analysis as a covariate. A MANCOVA using the three subscales as the dependent variables found a significant effect for parent group, $F(3, 1172) = 16.25, p < .001$; Wilks' Lambda = .960; partial eta squared = .04. Univariate tests showed Satisfaction $F(1, 1174) = 9.74, p < .01$; partial eta squared = .008 and Efficacy, $F(1, 1174) = 23.29, p < .001$; partial eta squared = .02 to be significantly different. Mothers' reports of efficacy in the parenting role were higher than those of fathers; however, fathers reported higher levels of satisfaction than mothers. There was a trend towards a significant difference for the Interest subscale, $F(1, 1174) = 5.46, p = .02$; partial eta squared = .005 with mothers reporting more interest in the parenting role than fathers. Means and standard deviations are presented in Table 5. In order to allow comparison with the data presented by Rogers and Matthews (2004) and with other studies that have used different numbers of items for the various factors, the table also contains mean scores for the three subscales (i.e., the total score divided by the number of items in the subscale).

INSERT TABLE 5 ABOUT HERE

The effect of parent age on sense of competence was examined initially using a multivariate analysis of variance since age had been collected as interval data. No effect for age was found for mothers, $F(12, 1532.18) = 0.88, p = .57$, but a significant multivariate effect was found for fathers, $F(15, 1676.06) = 2.23, p < .01$; Wilks' Lambda = 2.25; partial eta squared = .018. The univariate analysis showed the effect was restricted to the Efficacy subscale, $F(3, 608) = 7.03, p < .001$; partial eta squared = .037. Bonferroni post hoc analyses were conducted after removing the data of three fathers who were below 20 ($n = 1$) and over 60 ($n = 2$) years of age. There were significant

differences between fathers who were over 50 and those who were in the age groups 21-30 years and 31-40 years, both at $p < .01$. (See Table 5.)

An examination of the impact of child developmental stage was difficult because most families had children whose ages were spread across at least two of the developmental phases of early childhood, middle childhood and adolescence. In order to have groups of sufficient size, the sample was divided into three distinct groups on the basis of the children's ages. The first group had one or more children living at home who were 12 years or older but had no children in the 0 to 6 years age bracket. There were 229 mothers and 274 fathers in this group. The second group had one or more children between the ages of 0 to 6 years and no children aged 12 years or older. There were 256 mothers and 267 fathers in this group. The third group, excluded from the analysis, did not meet either of these criteria.

Because parent group was confounded by education (discussed earlier), a 2 (parent group) x 2 (children's age group) MANCOVA was conducted with educational level as a covariate. There was a significant effect for parent group, $F(3, 989) = 17.40, p < .001$; Wilks' lambda = .950; partial eta squared = .050, with mother/father differences being very similar to those reported earlier. There was no significant effect for children's age group $F(3, 989) = 2.47, p = .061$ and the interaction was not significant, $F(3, 989) = 0.99, p = .40$.

Discussion

The current study was designed to overcome some of the limitations of previous investigations of the factor structure of the PSOC and to provide a much-needed

normative comparison group. Our sample is considerably larger than those of Johnston and Mash (1989) and Ohan et al. (2000), thus enabling separate factor analyses to be conducted for mothers and fathers. Although the sample used by Rogers and Matthews (2004) was comparable in size, it did not represent a normative group. A notable strength of the current study is that the sample includes a good number of fathers, a group that is notoriously difficult to recruit. A second strength lies in the fact that the mother/father samples were completely independent of each other, unlike those who participated in the studies reported by Ohan et al. (2000) and Rogers and Matthews (2004). In addition, the range and spread of ages of children in the participating families provided the opportunity to compare parenting sense of competence in parents of younger children and adolescents which has not been possible previously.

The structure of the PSOC differs slightly from those reported elsewhere. The three factors account for considerably more variance than the solutions achieved by Johnston and Mash (1989) or Ohan et al. (2000) and approximately similar proportions of variance as Rogers and Matthews (2004). Like Rogers and Matthews, we obtained an interpretable third factor. This factor includes item 17 which was omitted from the version of the PSOC used by Rogers and Matthews. This item did not contribute to the solution reported by Johnston and Mash (1989); however, in our analyses, it made a substantial contribution to the third factor and we thus suggest its reinstatement on the PSOC. Given that the Interest factor reflects parent engagement in the parenting role, and that engagement has significant implications for intervention, it may be worth adding additional items that tap this important dimension, as Rogers and Matthews have suggested.

The fact that the Control factor contained only two items undoubtedly contributed to its low level of internal consistency. However, this is not the only likely issue. Item 1 is a difficult question to answer as it contains three separate components (*viz.*, *The problems of taking care of a child are easy to solve once you know how your actions affect your child, an understanding I have acquired*). Item 7, the other question loading on this factor, is also multipart (*Being a parent is manageable, and any problems are easily solved*). While there are several other multipart items in the questionnaire, these appear to be those most likely to cause confusion. As Rogers and Matthews (2004) found, item 5 does not load on any factor. We suggest therefore that items 1, 5 and 7 be omitted from the PSOC.

Compared with the mean scores obtained by Rogers and Matthews (2004), the mothers and fathers in our study scored higher on all three subscales. The most notable discrepancy is for maternal Efficacy (mean = 3.21 in Rogers and Matthews, compared with 4.41 in the current study). It is likely that these discrepancies result from differences in the two samples. The parents in Rogers and Matthews' (2004) study were essentially a clinical group, albeit probably not a very extreme one. Parents had either decided themselves that they needed support with their parenting or had been recommended to seek such support. Since child behaviour problems and other parenting difficulties have been associated with lower levels of parenting self-efficacy (see, for example Markie-Dadds & Sanders 2006), it is not surprising that the mothers in Rogers and Matthews' study reported lower self-efficacy than did mothers in the current normative sample.

Our findings on mother-father differences in parenting satisfaction mirror those reported by other researchers. Johnston and Mash (1989) and Rogers and Matthews

(2004) both found, as we did, that fathers were more satisfied with the parenting role than were mothers. Johnston and Mash and Rogers and Matthews found no difference between mothers and fathers on the Efficacy subscale; however, the mothers in our study reported feeling significantly more efficacious than did fathers. The fact that the order of emergence of factors differs for mothers and fathers suggests that there are different drivers to the ways that the two groups respond to the PSOC. For mothers, self-efficacy is most important, whereas for fathers satisfaction appears to be the stronger contributor.

There are some methodological limitations related to the data collection method used in this study. First, multiple data collectors were used and, although they were given strict written and verbal instructions regarding administration of the questionnaire, some inconsistencies in data collection methods may have occurred. Second, the fact that families were known to the student researchers who had access to their questionnaires may have influenced some of the responses. It is possible that parents responded more positively than they might have done if the researchers had been unknown to them, and this possibility needs to be kept in mind when using the normative data.

Another caution is related to the instruction that asked parents to respond about their general experiences of parenting. In some previous examinations of the PSOC (Johnston & Mash 1989; Ohan et al. 2000), parents were asked to answer with a particular child in mind. In clinical practice, it is likely that the measure of interest will be parenting competence with respect to an identified child. Community based interventions and research investigations of parenting, on the other hand, are likely to take a broader focus and it is for these purposes that the normative data presented here will be most applicable. Given that only 6 of the original 17 PSOC items are worded in a way that can be applied

to an individual child, future investigations of the PSOC might consider adapting the instrument as two versions: one in which all items are worded to relate specifically to a target child and another in which the items relate to parenting experiences generally.

Although the factorial validity and internal consistency of the three PSOC factors of Satisfaction, Efficacy and Interest would appear to be well established, more work needs to be done on ensuring that others aspects of validity are also strong. Rogers and Matthews (2004) reported evidence of concurrent validity for the Satisfaction factor. There was little evidence, however, to support the concurrent validity of the Efficacy and Interest factors with this sample. Lovejoy et al. (1997) reported disappointing results for the Efficacy subscale (the only one used) in a study investigating the convergent and discriminative validity of the measure.

The sample in the present study is reflective of the age spread of current Australian parents. This means, however, that very few parents under the age of 20 were included. Further research is needed to establish appropriate norms for this particular group. We found lower levels of efficacy in fathers aged over 50 years, although there were no differences related to child age. This may be an important area for further research aimed at identifying the factors that are contributing to fathers' efficacy.

In summary, the data presented in this paper provide evidence that the PSOC comprises three useful factors reflecting satisfaction in the parental role, parenting efficacy and interest in parenting. The normative data provided here will be of value to investigations of the impact of interventions related to parenting and may allow the identification of parents who are at risk of developing ineffective or unsatisfying interactions with their children .

References

Ardelt, M. & Eccles, J.S. (2001) Effects of mothers' parental efficacy beliefs and promotive parenting strategies on inner-city youth. *Journal of Family Issues*, **22**, 944-972.

Australian Bureau of Statistics (2005) *Year Book Australia* (No. 1301.0). Canberra: Author.

Bretherton, I., Madison, W.I., Lambert, J. D. & Golby, B. (2005) Involved fathers of preschool children as seen by themselves and their wives: accounts of attachment, socialization, and companionship. *Attachment & Human Development*, **7**, 229-251.

Coleman, P.K. & Karraker, K.H. (1998) Self-efficacy and parenting quality: findings and future applications. *Developmental Review*, **18**, 47-85.

Coleman, P.K. & Karraker, K.H. (2000) Parenting self-efficacy among mothers of school-age children: Conceptualization, measurement, and correlates. *Family Relations*, **49**, 13-24.

Elder, G.H. (1995) Life trajectories in changing societies. In: *Self-Efficacy in Changing Societies* (ed. A. Bandura), pp. 46-68. Cambridge University Press, New York.

Elliott, M.R., Reilly, S.M., Drummond, J. & Letourneau, N. (2002) The effect of different soothing interventions on infant crying and on parent-infant interaction. *Infant Mental Health Journal*, **23**, 310-328.

Gamble, W.C., Ramakumar, S. & Diaz, A. (2007) Maternal and paternal similarities and differences in parenting: an examination of Mexican-American parents of young children. *Early Childhood Research Quarterly*, **22**, 72-88.

Gondoli, D.M. & Silverberg, S.B. (1997) Maternal emotional distress and diminished responsiveness: the mediating role of parenting efficacy and parental perspective taking. *Developmental Psychology*, **33**, 861-868.

Hudson, D.B., Campbell-Grossman, C. & Fleck, M.O. (2003) Effects of the New Fathers Network on first-time fathers' parenting self-efficacy and parenting satisfaction during the transition to parenthood. *Issues in Comprehensive Pediatric Nursing*, **26**, 217-229.

Johnston, C. & Mash, E.J. (1989) A measure of parenting satisfaction and efficacy. *Journal of Clinical Child Psychology*, **18**, 167-175.

Jones, T.L. & Prinz, R.J. (2005) Potential roles of parental self-efficacy in parent and child adjustment: a review. *Clinical Psychology Review*, **25**, 341-363.

Lovejoy, M.C., Verda, M.R. & Hays, C.E. (1997) Convergent and discriminant validity of measures of parenting efficacy and control. *Journal of Clinical Child Psychology*, **26**, 366-376.

MacPhee, D., Fritz, J. & Miller-Heyl, J. (1996) Ethnic variations in personal social networks and parenting. *Child Development*, **67**, 3278-3295.

Markie-Dadds, C. & Sanders, M.R. (2006) Self-directed Triple P (Positive Parenting Program) for mothers with children at-risk of developing conduct problems. *Behavioural and Cognitive Psychotherapy*, **34**, 259-275.

Miller-Heyl, J., MacPhee, D. & Fritz, J.J. (1998) DARE to be you: a family-support, early prevention program. *Journal of Primary Prevention*, **18**, 257-285.

Ohan, J.L., Leung, D.W. & Johnston, C. (2000) The Parenting Sense of Competence Scale: evidence of a stable factor structure and validity. *Canadian Journal of Behavioral Science*, **32**, 251-261.

Peterson, L., Tremblay, G., Ewigman, B. & Saldana, L. (2003) Multilevel selected primary prevention of child maltreatment. *Journal of Consulting and Clinical Psychology*, **71**, 601-612.

Pisterman, S., Firestone, P., McGrath, P., Goodman, J.T., Webster, I., Mallory, R. & Goffin, B. (1992) The effects of parent training on parenting stress and sense of competence. *Canadian Journal of Behavioural Science*, **24**, 41-58.

Reyome, N.D. (1995) Sense of competence and attitudes toward abusive interactions with adolescents in residential child care workers. *Journal of Child and Youth Care*, **10**, 57-62.

Rogers, H. & Matthews, J. (2004) The Parenting Sense of Competence Scale: investigation of the factor structure, reliability, and validity for an Australian sample. *Australian Psychologist*, **39**, 88-96.

Shumow, L. & Lomax, R. (2002) Parental self-efficacy: predictor of parenting behaviour adolescent outcomes. *Parenting, Science and Practice*, **2**, 127-150.

Sofronoff, K. & Farbotko, M. (2002) The effectiveness of parent management training to increase self-efficacy in parents of children with Asperger syndrome. *Autism*, **6**, 271-286.

Tabachnick, B.G. & Fidell, L.S. (2001) *Using Multivariate Statistics*, 4th edn. Allyn & Bacon, Boston.

Teti, D.M. & Gelfand, D.M. (1991) Behavioral competence among mothers of infants in the first year: the mediational role of maternal self-efficacy. *Child Development*, **62**, 918-929.

Table 1. Factor structure and contributing items from three studies of the Parenting Sense of Competence Scale.

Factor	Item	Johnston & Mash (1989)	Ohan et al. (2000)	Rogers & Matthews (2004)
SATISFACTION	2. Even though being a parent could be rewarding, I am frustrated now while my child is at his/her present age.	2	2	2
	3. I go to bed the same way I wake up in the morning, feeling I have not accomplished a whole lot.	3	3	3
	4. I do not know why it is, but sometimes when I'm supposed to be in control, I feel more like the one being manipulated.	4	4	4
	5. My mother/father was better prepared to be a good mother/father than I am.	5	5 (mothers only)	
	8. A difficult problem in being a parent is not knowing whether you're doing a good job or a bad one.	8	8	8 (fathers only)
	9. Sometimes I feel like I'm not getting anything done.	9	9	9
	12. My talents and interests are in other areas, not in being a parent.	12	12 (fathers only)	
	14. If being a mother/father of a child were only more interesting, I would be motivated to do a better job as a parent.	14	14 (fathers only)	
	16. Being a parent makes me tense and anxious.	16	16	16
	Percentage of variance		23.6	31.8 (mothers) 26.8 (fathers)
EFFICACY	1. The problems of taking care of a child are easy to solve once you know how your actions affect your child, an understanding I have acquired.	1	1	1
	6. I would make a fine model for a new mother/father to follow in order to learn what she/he would need to know in order to be a good parent.	6	6 (mothers only)	6
	7. Being a parent is manageable, and any problems are easily solved.	7	7	7

	10. I meet my own personal expectations for expertise in caring for my child.	10	10	10
	11. If anyone can find the answer to what is troubling my child, I am the one.	11	11	11
	13. Considering how long I've been a mother/father, I feel thoroughly familiar with this role.	13	13	13
	15. I honestly believe I have all the skills necessary to be a good mother/father to my child.	15	15	15
	17. Being a good mother/father is a reward in itself.		17 (mothers only)	
Percentage of variance		12.5	11.4 (mothers) 14.1 (fathers)	14.6 (mothers) 14.4 (fathers)
INTEREST	12. My talents and interests are in other areas, not in being a parent.			12
	14. If being a mother/father of a child were only more interesting, I would be motivated to do a better job as a parent.			14
Percentage of variance				8.8 (mothers) 8.5 (fathers)

Table 2. Numbers (percentages) of mothers and fathers in each of six age groupings and five levels of education.

	Mothers (n = 586)	Fathers (n = 615)
<hr/>		
<u>Age group</u>		
20 yrs or younger	2 (0.3%)	1 (0.2%)
21-30 yrs	133 (22.7%)	89 (14.5%)
31-40 yrs	249 (42.5%)	226 (36.7%)
41-50 yrs	189 (32.3%)	257 (41.8%)
51-60 yrs	13 (2.2%)	40 (6.5%)
61-70yrs	0	2 (0.3%)
<u>Highest educational level</u>		
Grade 10 or lower	144 (24.6%)	106 (17.2%)
Grade 11 or 12	152 (25.9%)	158 (25.7%)
Certificate/diploma	127 (21.7%)	151 (24.6%)
Bachelor degree	109 (18.6%)	114 (18.5%)
Postgraduate	38 (6.5%)	78 (12.7%)
Missing	16 (2.7%)	8 (1.3%)

Table 3. Factor structure of the Parenting Sense of Competence Scale for mothers (n = 586) and fathers (n = 615). Loadings for fathers are in brackets.

Item	Satisfaction	Efficacy	Interest	Control
2	-.66 (.64)			
3	-.66 (.68)			
4	-.73 (.72)			
8	-.52 (.70)			
9	-.61 (.71)			
16	-.56 (.53)			
6		.48 (-.51)		
10		.58 (-.64)		
11		.70 (-.63)		
13		.62 (-.68)		
15		.69 (-.74)		
12			.74 (.66)	
14			.74 (.71)	
17			.64 (.62)	
1				.85 (.75)
7				.44 (.48)

Table 4. Pearson correlations of the subscales of the Parenting Sense of Competence Scale and education for mothers (n = 586) and fathers (n = 615) (fathers above the diagonal).

Subscale	Satisfaction	Efficacy	Interest
Satisfaction	1	.28***	.30***
Efficacy	.27***	1	.30***
Interest	.23***	.33***	1

*** $p < .001$

Table 5. Totals and means (standard deviations) for subscales of the Parenting Sense of Competence Scale for mothers and fathers.

Subscale	Mothers (n = 586)		Fathers (n = 615)	
	Total	Mean	Total	Mean
Satisfaction	22.72 (5.84)	3.79 (0.97)	23.97 (5.81)	4.0 (0.97)
Efficacy	22.03 (4.05)	4.41 (0.81)	20.95 ^a (4.29)	4.19 ^a (0.86)
Interest	16.17 (2.20)	5.39 (0.73)	15.86 (2.20)	5.29 (0.73)
Total Scale ^b	60.92 (8.94)	4.35 (0.64)	60.62 (9.24)	4.33 (0.66)

^a Applies to fathers up to age 50 only. Efficacy total for fathers aged 51-60 = 18.73 (SD = 4.88) and mean = 3.75 (SD = 0.98).

^b Minus Items 1, 5 and 7.