

Australian Journal of Educational & Developmental Psychology. Vol 8, 2008, pp 36- 48

A Psychometric Evaluation of the Parent Self-efficacy in Managing the Transition to School Scale¹

Rebecca Giallo¹
Mandy Kienhuis²
Karli Treyvaud¹
Jan Matthews¹

¹*Parenting Research Centre*

²*RMIT University*

ABSTRACT

The psychometric properties of the Parent Self-efficacy in Managing the Transition to School Scale (PSMTSS) were investigated with a sample of 763 mothers whose children were starting primary school in Australia. Exploratory factor analysis identified two factors, Efficacy and Worry, accounting for 56.6% of the total variance in parent self-efficacy scores. These factors were demonstrated to have excellent internal consistency. Convergent validity of the PSMTSS was established using the Parenting Sense of Competence Scale (PSOC) as a criterion measure. Finally, preliminary analyses reveal a significant relationship between parent self-efficacy to manage the transition to school and children's school adjustment outcomes. Implications for future school transition and parental self-efficacy research are discussed.

INTRODUCTION

Starting primary school is an important milestone for children and families. A successful transition to school has been associated with future academic achievement (Belsky & MacKinnon, 1994; Ensminger & Slusaric, 1992; Entwisle & Alexander, 1998; Gutman, Sameroff, & Cole, 2003), stable peer relationships, and increased school attendance (Ladd & Price, 1987). While the majority of children adjust well to starting primary school, a small proportion of children experience adjustment difficulties (Hausken & Rathbun, 2002; Rimm-Kaufman, Pianta, & Cox, 2000) including reluctance to go to school, complaints of being sick (Hausken & Rathbun, 2002), increased temper tantrums, worries, and crying (Ladd & Price, 1987). Parents often anticipate that their children will experience such difficulties (Ramey, Gaines Lanzi, Phillips & Ramey, 1998), and thus the transition to school can also present as a challenging time for parents as they help their children settle in and adjust. In a recent study of 132 parents whose children were starting school, parents reported that they were concerned about their child's adjustment to starting a new school, behaviour difficulties, academic skills, and ability to get along with peers and follow instructions (McIntyre et al., 2007). Further to this, approximately 70% of parents indicated that they wanted information about what they could do to help their children prepare for transition. These findings suggest that parents may feel unprepared

¹ Address for correspondence:
Rebecca Giallo
24 Drummond St, Carlton, 3028
Phone: 8660 3500
Email: rgiallo@parentingrc.org.au

for their child's transition into school, and that they may be uncertain about how to best help their child adjust. This underscores parents' need to be well informed, knowledgeable and confident about managing the transition process.

Although the evidence suggests that parents may require support at this time, the focus of school transition research has primarily been on identifying socio-demographic (i.e., age, gender, socio-economic status, language spoken at home), child (i.e., preschool experience, social skills), and school (i.e., provision of transition activities, positive teacher-child relationships) factors as determinants of children's successful adjustment to school (Birch & Ladd, 1997; Hausken & Rathbun, 2002; Ladd & Price, 1987; Margetts, 1997; Pianta, Steinberg, & Rollins, 1995; Rimm-Kaufman & Pianta, 2000). Few studies have investigated parent and family factors as predictors of children's transition outcomes (see Dockett & Perry, 1999; Margetts, 2000). Of the research available, positive parent beliefs, attitudes and feelings about school (Dockett & Perry 1999; Margetts, 2000) and two-parent family status (Entwisle & Alexander, 1998) have been associated with a successful transition. Further research into parent and family factors such as parental knowledge and confidence about managing the transition process that may influence children's adjustment to school will be useful in determining how to best support parents at this time, and promote positive transition outcomes for children.

A parent factor of particular interest in the current study is parental self-efficacy beliefs. Self-efficacy has been conceptualized as a set of beliefs about one's ability to perform a behaviour, task or skill (efficacy), and the belief that one's behaviour will result in a particular outcome (outcome expectations)(Bandura, 1986). Applied to the domain of parenting, parental self-efficacy refers to parents' beliefs about their ability to parent successfully (Ardelt & Eccles, 2001; Jones & Prinz, 2005), and has been associated with parents' use of positive parenting strategies, coping and persistence in demanding parenting situations (Ardelt & Eccles, 2001; Coleman & Karraker, 1997; Jones & Prinz, 2005), and a wide range of child socio-emotional, behavioural and academic outcomes (Coleman & Karraker, 1997; Jones & Prinz, 2005).

Given this body of work, parental self-efficacy about managing the transition period may be an important factor associated with parental behaviour and coping at this time, and children's successful adjustment to school. For instance, when parents are knowledgeable and confident about their ability to help their child start school, they may be more likely to employ positive parenting strategies, cope with the parenting challenges brought about by this time, and in turn promote positive child transition outcomes. Although this is potentially an important area of study, to the best of the authors' knowledge, no scale to measure parental self-efficacy beliefs about managing the transition to school exists.

Development of a scale to assess parental self-efficacy to manage children's transition into school is also important in providing an opportunity to contribute to parental self-efficacy theory and measurement. Approaches to measurement of parental self-efficacy have primarily focused on general parenting skills and abilities (domain level self-efficacy) rather than on specific parenting tasks or areas of parenting (task-specific self-efficacy) such as supervision, monitoring and disciplining, and involvement in children's education and learning (Coleman & Karraker, 1997; Hoover-Dempsey et al; Jones & Prinz, 2005; Walker et al). However, Bandura (1989) argues that self-efficacy is a task-specific and situational construct whereby confidence may vary depending upon the skills required or the situation faced. Consistent with this view, Coleman and Karraker (1997) argue for the development of measures to assess parental self-efficacy in specific parenting tasks, particularly as children get older and parents experience new challenges in raising children.

Given the potentially invaluable application of a scale measuring parent self-efficacy to manage their children's transition to school for both early education and parental self-efficacy researchers, the purpose of the current study was to report on the development and psychometric evaluation of a new self-report measure, The Parent Self-efficacy in Managing the Transition to School Scale (PSMTSS). This is seen as a critical first step in test construction and will determine

whether the PSMTSS is a psychometrically sound instrument to be used in future educational and parental self-efficacy research.

The PSMTSS was developed drawing upon parental self-efficacy theory (Ardelt & Eccles, 2001; Jones & Prinz, 2005) and research highlighting the importance of knowledge about appropriate childcare responses, and confidence in one's ability to carry out these behaviours (Bandura, 1989; Coleman & Karraker, 1997). The 9-item scale included items assessing parents' perceived knowledge about what is involved in the transition process, what their child might experience as they move into primary school, and where they can get information about parenting a child during the transition to school. Items assessing parent confidence to cope with changes brought about by the transition period and their ability to help their children adjust were also included. Finally, given that self-efficacy beliefs can be undermined by aversive physiological and psychological arousal such as anxiety or worry (Bandura, 1989; Coleman & Karraker, 1997), items assessing parents' worry and concern about being able to manage the transition process were included. Additional information about the development of the PSMTSS is provided in the method section.

The purpose of the current study was to test the psychometric properties of a new measure, The Parent Self-efficacy in Managing the Transition to School Scale (PSMTSS) in a large sample of mothers whose children were starting school in Australia. The aims of the study were fourfold. First, the construct validity of the PSMTSS was assessed by examining its factor structure. Although the development of the scale was based on self-efficacy theory, an exploratory approach to examining the dimensionality of the scale was deemed most appropriate. To the best of the authors' knowledge the PSMTSS is the first parental self-efficacy measure of its kind, and there were no a priori number of common factors to be extracted or specific hypotheses about the factor structure to test.

Second, the internal consistency of the PSMTSS was assessed. This was considered the best estimate of reliability for the scale. Test-retest reliability is not appropriate as self-efficacy beliefs about managing the transition period may fluctuate over time as parents obtain information about the transition process and child's school, and have successful experiences or challenges in helping their child adjust. Split-half and parallel-form reliability analyses were not conducted due to the small number of scale items, and the absence of an alternate form, respectively.

Third, construct validity of the PSMTSS was further assessed by examining convergent validity with a criterion measure, the Parenting Sense of Competence Scale (PSOC; Johnston & Mash, 1989). The PSOC is a well validated and widely used measure to assess parent self-efficacy in their overall parenting role. Although the PSOC and PSTMSS are domain- and task-specific measures, respectively, both scales are thought to assess theoretically related constructs of parental self-efficacy. Therefore, it was hypothesized that a moderate correlation between the PSTMSS and PSOC scales would exist, establishing convergent validity. Finally, an investigation into the relationships between parental self-efficacy to manage the transition period and parent reported child school adjustment outcomes was conducted. Given past research indicating a strong relationship between general parental self-efficacy and a broad range of child outcomes (Coleman & Karraker, 1997; Jones & Prinz, 2005), it was hypothesized that significant relationships between the PSTMSS and child school adjustment outcomes would exist.

METHOD

Participants

Participants in this study took part in a school-based program to provide parents with practical information and strategies to help their children adjust to the transition to primary school. This program was delivered by the Parenting Research Centre in 26 Department of Education and Catholic Education Office primary schools in Melbourne, Victoria. A total of 922 families comprised of 804 (86.7%) mothers, 110 (12.4%) fathers, five grandparents (0.5%) and three siblings (0.3%) completed questionnaires before commencing the school transition program.

This represented approximately 48% of the total number of families with children entering primary grade across the participant schools. There were 46 parents who dropped out of the study, and a further 37 cases were removed from the analyses due to more than 10% missing data across variables. Only data collected from mothers was analyzed for the purposes of this study, resulting in a final sample size of 763 mothers. Table 1 presents the demographic information for mothers and children in grade prep, including age, gender, family type, language spoken at home, mother's level of education and school type attended by the child.

To assess the representativeness of the sample, characteristics of parents and children in the study were compared with the national averages provided by the Australian Bureau of Statistics (ABS; 2006). For family type, comparison was made to all Australian families, excluding couples without children. The proportions of couple and one parent families in the current sample was lower than the national averages, and may be explained by the high number of families in the current sample who did not report family type. Although the proportion of families from English speaking backgrounds was similar to population figures, the proportion of families from non-English speaking backgrounds was higher in the current sample.

Due to the way that Australian Census data was collected, comparisons could not be made with mother's highest level of education for the primary school, below year 12, and Year 12 categories. Comparisons were made to non-school educational attainment for mothers aged between 25-44 years, and indicate that the current sample had comparative levels of tertiary and post-graduate qualifications. However, TAFE and trade qualifications were underrepresented in the current sample.

Table 1: Demographic Information for Mothers and Children in Prep Grade (N=763)

Demographic	<i>n</i>	%	Population Figures
Mother's age (M, SD)	742	35 yrs (4.90)	
Child's age	762	5 yrs (0.58)	
Children's Gender			
Male	330	43.3%	
Female	367	52.7%	
Not reported	66	8.7%	
Family Type			
Couple family	500	65.0%	72.1%
One parent family	79	10.4%	25.1%
Other/Extended family	4	0.5%	2.7%
Not reported	180	23.6%	
Language spoken at home			
English	599	78.5%	78.5%
Language other than English	159	20.8%	15.8%
Not reported	5	0.7%	5.7%
Mother's level of education			
Primary school	3	0.4%	
Below Year 12	159	20.8%	
Year 12	235	30.8%	
TAFE/Trade Qualification	140	18.3%	24.3%
Tertiary Qualification	147	19.7%	19.9%
Post-graduate Qualification	64	8.6%	6.0%
Not reported	15	2.0%	8.6%
School Type			
Department of Education	323	42.3%	
Catholic Education Office	440	57.7%	
Receiving Educational Maintenance Allowance	116	15.8%	

Demographic	<i>n</i>	%	Population Figures
Socio-economic status (SEIFA Index for Socio-economic Disadvantage)	754	979.48 (55.64)	<i>M</i> =1020.00

Note. Population figures obtained from Australian Bureau of Statistics Census Data (2006a; 2006b; 2006c)

Development of the PSMTSS

The PSMTSS is a 9-item self-report questionnaire designed to measure parents' self-efficacy in managing their children's transition into primary school. This scale was developed by the Parenting Research Centre, Australia, by drawing upon the parental self-efficacy theory literature, and research highlighting the importance of knowledge about appropriate childcare response, and confidence in one's ability to carry out these behaviours (Coleman & Karrak, 1997). The items were also inspired by other parental self-efficacy measures such as the PSOC, and with input from researchers and experts in the parenting and child education fields. Some items refer to parent knowledge and confidence in managing the transition process and supporting their child, while others refer to parent worry and concern about managing the transition period. These items were deemed to have good face validity. The items are rated on a 6-point Likert scale ranging from 1=Strongly disagree to 6=Strongly Agree. Reliability and validity information is presented in the results section.

Measures

Family Background Survey requests demographic information including family structure, parent age, level of education, language spoken at home, and age and gender of the child starting school and other children in the family.

The Australian Bureau of Statistics, Socio-economic Indexes for Areas (Trewin, 2003), based on 2001 population census data, was used to identify families' socioeconomic status (SES) based on their postal area code. The Index of Relative Socioeconomic Disadvantage was used and is based on variables such as low income, low educational attainment, and high unemployment. Higher scores reflect an area of relatively better economic status. For the geographical areas in Victoria, the mean value is 1020.00.

Parenting Sense of Competence Scale (PSOC; Johnston & Mash, 1989) is a 16-item self-report measure assessing parents' satisfaction and efficacy in their parenting role. Items are rated on a 6-point Likert scale ranging from 1=Strongly agree to 6=Strongly Disagree. Example items include 'Even though being a parent could be rewarding, I am frustrated now while my child is at his/her age' and 'Being a parent is manageable, and any problems are easily solved'. The Satisfaction subscale assesses parental motivation versus parenting frustration and anxiety, while the Efficacy subscale assesses perceived knowledge and competence in parenting. Studies examining the construct validity of the PSOC provide support for these two subscales (Johnston & Mash, 1989; Ohan, Leung, & Johnston, 2000). High scores on both subscales indicate high degrees of satisfaction and efficacy in parenting. Johnston and Mash (1989) reported internal consistency values (alpha) of .75 for the Satisfaction scale and .76 for the Efficacy scale. Internal consistency for the Efficacy and Satisfaction subscales for the current sample was .74 and .81, respectively.

Children's Adjustment to School Scale – Parent Report (Parenting Research Centre, 2005) is a 2-item parent report measure assessing children's academic and social adjustment to school. The items were rated on a 5-point Likert scale, ranging from 1=Not coping at all to 5=Coping extremely well. Higher scores reflect better adjustment to school.

School Entrant Health Questionnaire (SEHQ; Department of Human Services, 2003). The SEHQ was developed to assist parents of children (aged 5 to 7 years) to identify concerns regarding their child's health and wellbeing. This survey is distributed each year to parents and guardians of preparatory grade children in most Victorian primary schools. A single item from the SEHQ was used in the current study to assess children's resistance or refusal to go to school.

Parents were asked to rate ‘Does your child resist or sometimes refuse to go to school?’ on a 3 point scale ranging from 1=Rarely/Never to 3=Usually/Often.

Procedures

Following ethics approval from the Department of Education and Catholic Education Office Melbourne, 26 government and non-government schools in the north-west Melbourne metropolitan areas were recruited for an evaluation of the school-based transition to primary school parent program. Each school invited parents of children who were starting primary school in the following year to attend the program. At the first session, parents were given information outlining the purpose of the study, and consent was obtained to complete a brief survey before commencing the program. The questionnaires took approximately 15 minutes to complete. A small subset of parents from the original sample were asked to complete additional measures about child adjustment to school during Term 2, approximately 5 months after their children had started school.

RESULTS

Preliminary Analyses

The percentage of missing data was approximately 3.8% across variables, and these were replaced with the series mean (Tabachnick & Fidell, 2001). Statistical measures of normality indicated some minor skewness ($p < .001$). However, given the large sample size and the graphical normality plots showing that the data for the variables was approximately normally distributed, no data transformation procedures were conducted.

Construct Validity: Examining the Factor Structure of the PSMTSS

With the aim of exploring the factor structure underpinning the items in the PSMTSS, exploratory factor analysis using principal axis factoring was performed. Despite the theoretical basis for the development of the PSMTSS, an exploratory method of analysis was deemed most appropriate as this is a newly developed scale, and there were no a priori number of common factors to be extracted or specific hypotheses about the factor structure to test (Fabrigar, Wegener, MacCallum, Wegener, & Strahan, 1999).

Factorability of items was evidenced by values for Kaiser’s Measure of Sampling Adequacy that ranged from of .74 to .84, and a significant Bartlett’s Test of Sphericity ($p < .001$). Inspection of the communalities revealed that Items 6 and 9 had low communalities of .23 and .19 respectively, but were retained for the analysis due to the exploratory nature of the factor analysis at this stage. The analysis found two factors with Eigenvalues greater than 1, accounting for 56.6% of the variance. Examination of the scree plot also revealed two clear factors, as indicated by the substantial drop and flattening out after the first two factors. The first factor accounted for 36.9% of the variance and had an eigenvalue of 3.32. The second factor accounted for 19.7% of the variance and had an eigenvalue of 1.78.

Oblique rotations were performed as it was expected that there would be a correlation between the two factors. The items loading on the factors are presented in Table 2. Items pertaining to parent knowledge and confidence to manage the transition period loaded on to Factor 1, and were labeled Efficacy. Factor 2 contained items relating to parent worry and concern about their ability to help their child adjust to the transition period, and therefore was labeled Worry.

Reliability of the PSMTSS

Cronbach’s alpha co-efficients were calculated to assess the internal consistency of the two PSMTSS subscales. The Efficacy subscale had an alpha of .74, with item-total correlations ranging between .38 and .62. Item 9 had a low correlation of .38, but if deleted from the scale improved alpha by only .04, and therefore was retained. The Worry subscale yielded an alpha of

.76, with item-total correlations ranging between .42 and .67. Item 6 had a low correlation of .42, but if deleted from the scale improved alpha by .01, and therefore was retained.

Convergent validity of the PSMTSS with the PSOC

Pearson correlations were computed to examine the convergent validity of the PSMTSS with the PSOC as a criterion. Table 3 presents descriptive statistics and correlations between the scales. Correlations among the factors were moderate, but all significant at $p < .001$. The PSMTSS Efficacy subscale was significantly negatively correlated with PSMTSS Worry subscale, while it was positively correlated with the PSOC Efficacy, Satisfaction and Total Score subscales. The PSMTSS Worry subscale was negatively correlated with the PSOC Efficacy, Satisfaction and Total Score subscales.

Table 2: Item Loadings on the two Factors of the Parent Self-efficacy in Managing the Transition to School Scale (N=763)

Item		Efficacy	Worry
1	I have a clear understanding of what my child might experience as they move from kindergarten to primary school.	.74	
2	I have a clear understanding of what this school is doing to help the transition to primary school.	.73	
3	I feel confident that I will be able to cope well with my child’s move to primary school.	.71	
4	I feel confident that I can support my child well during this time.	.69	
9	I know how to get information about parenting a child during transition to school.	.61	
8	I worry about whether I can help my child adjust to his/her new school.		.81
7	I worry about my child’s adjustment in a new environment.		.75
5	I worry about coping with changes in general.		.64
6	I worry that our current situation at home might affect my child at school.		.48

Note. Only factor scores above .4 are reported.

Table 3: Descriptive Statistics and Correlations between PSMTSS and PSOC Scores (N=763)

Scale	Descriptives			Correlations				
	Range	M	SD	1	2	3	4	5
1. PSMTSS - Efficacy	5 - 30	25.13	3.05	-				
2. PSMTSS - Worry	4 - 24	10.98	4.25	-.27	-			
3. PSOC - Efficacy	7 - 42	32.31	4.60	.39	-.21	-		
4. PSOC - Satisfaction	9 - 54	38.90	7.50	.20	-.54	.30	-	
5. PSOC - Total	16 - 96	71.21	9.91	.33	-.50	.69	.90	-

Note. All p -values are significant at $p < .001$

Relationships between PSMTSS and Child School Adjustment Outcomes

Pearson correlations were computed to examine the relationships between the PSMTSS and child school adjustment outcomes as reported by a smaller subset of parents in Term 2, approximately 5 months after children have started school. The descriptive statistics and correlations are presented in Table 4. The PSMTSS Efficacy subscale was significantly positively correlated with children’s social school adjustment, $r(N=294)=.21, p=.001$, indicating that greater

levels of parental efficacy to manage transition were associated with better social adjustment outcomes for children as they start school. The PSMTSS Worry subscale was negatively correlated with both children's academic and social school adjustment, $r(N=294)=-.32, p<.001$ and $r(N=294)=-.29, p<.001$, respectively. This indicates that greater levels of parent worry about managing the transition period were associated with poorer academic and social adjustment outcomes for children as they start school. Finally, the PSMTSS Worry subscale was significantly positively correlated with children's resistance to go to school, $r(N=294)=.32, p=.001$, indicating that greater levels of parent worry about managing transition were associated with greater resistance to go to school.

Table 4: Descriptive Statistics and Correlations between PSMTSS and Child School Adjustment Outcomes (N=294)

Child School Adjustment Outcomes	Descriptives			Correlations	
	Range	<i>M</i>	<i>SD</i>	PSMTSS Efficacy	PSMTSS Worry
Academic Adjustment	1-5	4.30	0.83	.08	-.32**
Social Adjustment	1-5	4.28	0.84	.21**	-.29**
Resistance to go to school	1-3	1.15	0.38	.001	.32**

** $p<.001$

DISCUSSION

The purpose of the study was to investigate the psychometric properties of a new parental self-report measure, The Parent Self-efficacy in Managing the Transition to School Scale (PSMTSS) with a large sample of mothers whose children were entering primary school in Australia. First, the construct validity of the PSMTSS was assessed by examining its factor structure. The exploratory factor analysis identified two factors accounting for 56.6% of the variance in parent self-efficacy to manage the transition to school. These factors were labeled Efficacy and Worry. The first factor, Efficacy, accounted for 36.9% of the variance, reflecting parent perceptions of their knowledge about the transition process, how it may affect their child, and knowledge about how to get more information about parenting during this time. It also assessed the degree to which they feel competent in their ability to cope during the transition period and help their child adjust. This factor conforms closely with the 'efficacy' element of the self-efficacy construct and theory proposing that parental self-efficacy beliefs incorporate both specific knowledge of the behaviours involved in raising children and the confidence in one's ability to carry out those behaviours (Coleman & Karraker, 1997). The second factor, Worry, accounted for 19.7% of the variance, measuring parent concerns about factors associated with their home situation that may affect their child's adjustment, and their ability to support their child and promote positive adjustment outcomes for their children.

The PSMTSS Efficacy and Worry factors were moderately correlated indicating that they are reasonably independent, but conceptually related factors. Findings revealed that parents who were more efficacious about their ability to manage the transition period reported fewer worries or concerns about their ability to cope and their children's adjustment than parents who were less efficacious. Although further research is needed to investigate the nature of the association between the factors, it is hypothesized that the relationship is likely to be bidirectional. While parents who perceive themselves as being more knowledgeable and confident in their ability to manage the transition period may have fewer concerns at this time, it is also plausible that worries

and concerns about the transition period may undermine parent efficacy in their ability to help their child settle into school. For instance, Bandura (1989) asserts that emotional processes and reactions such as stress and anxiety may influence perceptions of ability to successfully manage challenging situations. Further research investigating the nature of the relationship between the factors, characteristics and processes that serve to strengthen self-efficacy and decrease worries and concerns (e.g., past experiences of transition with other children, information about transition provided by the school) may be useful in understanding differences in parental self-efficacy among parents of children whose children are making the transition to school and how to best support them during this time.

The second aim of the current study was to assess the reliability of the PSMTSS. Both factors demonstrated sufficiently high reliability coefficients to indicate adequate internal consistency. Parents' scores ranged widely for both of the factors, indicating that the measure is also sensitive to variability in the construct. This demonstrates that reliable measures of task-specific self-efficacy can be developed within the parenting domain.

The third aim of the study was to further assess the construct validity of the PSMTSS by assessing convergent validity with a well validated domain-level measure of parental self-efficacy designed to assess parents' satisfaction and efficacy in their overall parenting role. Findings revealed that the PSMTSS factors and PSOC subscales were moderately but significantly correlated, providing evidence that the PSMTSS and PSOC are assessing theoretically related constructs of parental self-efficacy. Specifically, the PSMTSS Efficacy factor was significantly positively correlated with the PSOC Efficacy, Satisfaction and Total Score subscales, indicating that parents who were efficacious in managing their children's transition to school also reported that they were efficacious and satisfied in their overall parenting role. Furthermore, the PSMTSS Worry factor was significantly negatively correlated with the PSOC Efficacy, Satisfaction and Total Scores subscales, indicating that parents who reported more worry and concern about the transition period were less efficacious and satisfied in their overall parenting role than parents who reported less worry and concern about this time.

In addition to providing evidence for convergent validity, these findings provide support for the significant relationship between domain and task-specific parental self-efficacy beliefs. In areas other than parenting, research suggests that measures of domain and task-specific self-efficacy are strongly associated with one another, but the directionality of the relationship is unclear (Coleman & Karraker, 1997). Thus, it could be suggested that parents who are already lacking confidence in their overall parenting abilities may experience more worry and concern about the transition period, and are more likely to report less confidence in their ability to manage this time than parents who are generally confident in their overall parenting abilities. Conversely, it is also possible that parents' lack of confidence to manage the transition to school may serve to undermine their sense of competence in their overall parenting abilities. These findings not only raise some important questions about the direction of the relationship, but also how these beliefs develop and influence one another. An area for further investigation is to identify how past experiences of other transition points (e.g., starting pre-school or childcare) is associated with parent confidence to manage the transition to primary school and overall confidence in parenting. It has been argued that past experiences are an important informational source in the development of self-efficacy beliefs (Bandura, 1989). It is possible that parents and/or children who have experienced challenges during previous transition experiences (e.g., starting childcare or pre-school) may experience more anxiety and less confidence in their ability to manage future transition situations.

The final aim of the study was to investigate relationships between parental self-efficacy to manage the transition period and children's academic and social adjustment to school. Parental efficacy to manage the transition was associated with parental report of better social adjustment outcomes for children as they start school. Furthermore, parental worry to manage the transition period was associated with poorer academic and social adjustment outcomes, and greater

resistance to go to school. These findings are in line with research indicating that general parental self-efficacy is associated with a broad range of child outcomes (Coleman & Karraker, 1997; Jones & Prinz, 2005). More specifically, previous research indicates that parents who are efficacious in their parenting role are more likely to engage in positive parenting behaviours that are associated with positive child outcomes (Ardelt & Eccles, 2001; Coleman & Karraker, 1997; Jones & Prinz, 2005). Therefore, in the current study, it is possible that parents with high self-efficacy to manage transition were more likely than parents with low self-efficacy to use positive parenting strategies that may be important in helping children make a smooth transition to school. Such parenting strategies could include expressing confidence in their child to cope with transition, engaging in preparation for school activities, modeling and reinforcing a positive attitude toward school, coping in challenging transition related situations, and maintaining consistent morning and bedtime routines.

It is worth noting that the relationship between parental self-efficacy and child adjustment to school is likely to be bidirectional. Thus it is also possible that parents whose children were experiencing early learning, behavioural or social/emotional difficulties may feel less efficacious in their ability to help their children adjust to starting school than parents whose children had no reported difficulties. This suggests that parents of children who have been identified as experiencing significant social, emotional, behavioural or learning difficulties prior to starting school may require additional support to manage this time, and to promote a smooth transition for their child. Future studies measuring specific parenting behaviours and transition preparation activities are needed to help to clarify the nature and direction of the relationship between parental self-efficacy beliefs, specific parenting behaviours and transition outcomes for children.

Limitations

Before considering the significance of the current study, there are several methodological issues to note. First, although effort was made to recruit families from a wide range of backgrounds and it is worth noting that the sample characteristics were similar to population figures, some groups may have been underrepresented (i.e., families from indigenous backgrounds) or overrepresented (e.g., families from non-English speaking backgrounds). Second, it is important to note that the sample consisted of families who volunteered to participate, and may differ from those who did not respond to the invitation to participate in the study.

A final limitation worth considering is that the results indicating a relationship between parental self-efficacy and child school adjustment outcomes may have been confounded by reporter bias. It is possible that parents with low self-efficacy to manage the transition may have perceived that their child was experiencing more difficulties than they actually were. Future studies would benefit from collecting information about child adjustment to school from multiple informants such as teachers and children themselves.

Implications and Conclusions

Despite these limitations, the current study has important implications for future research, and makes an important contribution to theory and measurement of parental self-efficacy. First, the current study demonstrated that the PSTMSS is a reliable and valid measure that can be used to be used in future early education, school transition and parental self-efficacy research. Avenues for further research include assessing whether the factor structure of the PSMTSS and correlations with the PSOC differs for fathers, and exploring predictors of parental self-efficacy during the transition to school transition. Identifying parent and child demographic (e.g., age, gender, cultural and language background) and other contextual variables (e.g., parent wellbeing, perceived social support) that may influence parental self-efficacy specific to their ability to manage transition would be an important step toward identifying how to best support parents to help their children and family adjust to this important developmental milestone.

Second, this study contributes to the measurement of task-level parenting self-efficacy, which has received relatively little attention in the research literature. In this study, the PSMTSS was used to assess parental self-efficacy during their children's transition to primary school, but could be extended to assess parent confidence during other school transition points such as the transition to secondary school. Another area for future research is to assess the predictive validity of the PSMTSS to investigate whether parent confidence to manage their child's transition to school predicts the type of strategies they use and their child's adjustment to the transition. Research has demonstrated that domain-level parental self-efficacy beliefs are significantly associated with parent's use of effective positive parenting strategies (Ardelt & Eccles, 2001; Coleman & Karraker, 1997; Jones & Prinz, 2005). Therefore, it can be hypothesized that parents who are more knowledgeable and confident in their ability to manage their children's transition to school may employ more effective parenting strategies that help their children adjust to this time. In addition to this, future research can be conducted to compare the predictive validity of task-specific and domain-level parental self-efficacy. Although task-specific measures have been found to be superior to global or domain-level measures in areas other than parenting research, this is an area which has gone unexplored in the parenting area (Coleman & Karraker, 1997).

Finally, this study has important implications for school educators, and student wellbeing and welfare staff involved in helping children and families make the transition into school. The current study shows that parental self-efficacy to manage transition and their children's academic and social adjustment to school are significantly related, affirming the need to support both parents and children through the transition period, and provide parents with adequate information, resources and support. The PSMTSS may be used as a tool to assess parent experiences as their children start school and to identify parents who may lack confidence in or are worried about their ability to manage the transition process and may require information and support about how to best manage this developmental period in their children's lives.

REFERENCES

- Ardelt, M., & Eccles, J. (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 (2006a). *Census of population and housing, Australia, 2006*, Cat. No. 2001.0 – 2006. Community Profile Series, viewed 15 November 2007, <http://www.censusdata.abs.gov.au>
- Australian Bureau of Statistics (2006b). *Census of population and housing, Australia, 2006*, Cat. No. 2001.0 - 2006 Community Profile Series, viewed 15 November 2007, <http://www.censusdata.abs.gov.au>
- Australian Bureau of Statistics (2006c). *Census of population and housing, Australia, 2006*. Cat. No. 2001.0 - 2006 Community Profile Series, viewed 15 November 2007, <http://www.censusdata.abs.gov.au>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1989). Regulation of cognitive processes through perceived self-efficacy. *Developmental Psychology*, 25, 729-735.
- Belsky, J., & MacKinnon, C. (1994). Transition to school: Developmental trajectories and school experiences. *Early Education and Development*, 5, 106-119.
- Coleman, K., & Karraker, K. (1997). Self-efficacy and parenting quality: Findings and future applications. *Developmental Review*, 18, 47-85.
- Department of Human Services. (2003). *Children's Health: Parents Perceptions. Parent's views on the health and well being of Victorian preparatory grade children: School Entrant Health Questionnaire (SEHQ) 2000 Report*. Melbourne: Rural and Regional Health and Aged Care Services Division, Victorian Government Department of Human Services.

- Ensminger, M., & Slusarcick, A. (1992). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. *Sociology of Education*, 65, 95-113.
- Entwisle, D., & Alexander, K. (1998). Facilitating the transition to first grade: The nature of transition and research on factors affecting it. *The Elementary School Journal*, 98, 351-364.
- Fabrigar, L., Wegener, D., MacCallum, R., Wegener, D., & Strahan, E. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4, 272-299.
- Gutman, L., Sameroff, A., & Cole, R. (2003). Academic growth curve trajectories from 1st to 12th grade: Effects of multiple social risk factors and preschool child factors. *Developmental Psychology*, 39, 777-790.
- Hausken, E., & Rathbun, A. (2002, 4 April 2002). *Adjustment to kindergarten: Child, family and kindergarten program factors*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.
- Hoover-Dempsey, K., Bassler, O., & Brissie, J. (1992). Explorations in parent-school relations. *Journal of Educational Research*, 85, 287-294.
- Jones, T., & Prinz, R. (2005). Potential roles of parental self-efficacy in parent and child adjustment: A review. *Clinical Psychology Review*, 25, 341-363.
- Ladd, G., & Price, J. (1987). Predicting children's social and school adjustment following the transition from preschool to kindergarten. *Child Development*, 58, 1168-1189.
- Ohan, J., Leung, D., & Johnston, C. (2000). The Parenting Sense of Competence Scale: Evidence of a stable factor structure and validity. *Canadian Journal of Behavioural Science*, 32, 251-261.
- Parenting Research Centre. (2005). Children's Adjustment to School Scale - Parent Report, Unpublished measure.
- Ramey, S. L., Gaines Lanzi, R., Phillips, M.M., & Ramey, C.T. (1998). Perspectives of Former Head Start Children and Their Parents on School and the Transition to School. *The Elementary School Journal*, 98, 311-327.
- Rimm-Kaufman, S., Pianta, R., & Cox, M. (2000). Teachers' judgments of problems in the transition to kindergarten. *Early Childhood Research Quarterly*, 15, 147-166.
- Trewin, D. (2003). *Australian Bureau of Statistics Information Paper: Socio-economic Indexes for Areas*. Commonwealth Government of Australia: Canberra.
- Walker, J., A. Wilkins, A., Dallaire, J., Sandler, H., Hoover-Dempsey, K. (2005). Parental involvement: Model revision through scale development. *The Elementary School Journal*, 106, 85-106.
- Woodruff, S., & Cashman, J. (1993). Task, domain, and general self-efficacy: A reexamination of the Self-Efficacy Scale. *Psychological Reports*, 72, 423-432.

Author biographical details:

Dr Rebecca Giallo is a psychologist and researcher with over 10 years experience working with professionals, families and children in a wide range of clinical, educational, early intervention and health settings.

Dr Karli Treyvaud is a clinical research Fellow at the Parenting Research Centre, where she is involved in the development, coordination and provision of research and programs. Karli completed a Doctorate of Psychology at The University of Melbourne and also has experience working clinically with families and children.

Associate Professor Jan Matthews is currently Deputy Director of the Parenting Research Centre. She has been involved in the tertiary education sector for over thirty years. Jan has also been involved in the areas of teaching and research, and program development including parenting and family intervention, staff

training and program evaluation.

Dr Mandy Kienhuis is a psychologist and has experience working with families and children in both educational and clinical settings. Her research interests include program evaluation, adjustment to transitions, and the promotion of wellbeing in children and families.