

KARITANE **P**ARENTING **C**ONFIDENCE **S**CALE

MANUAL

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Karitane Parenting Confidence Scale (KPCS)

Manual v.1

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Note: Sections of this manual have been adapted from two journal manuscripts:

Črnčec, R., Barnett, B., & Matthey, S. (under review). Review of parenting confidence scales. *Journal of Nursing Measurement*.

Črnčec, R., Barnett, B., & Matthey, S. (in press: 2008). Development of an instrument to assess perceived self-efficacy in the parents of infants. *Research in Nursing and Health*. Wiley Periodicals, Inc.

KARITANE PARENTING CONFIDENCE SCALE

FOR PARENTS OF INFANTS

Reference as: Črnčec, R., Barnett, B., & Matthey, S. (in press: 2008). Development of an instrument to assess perceived self-efficacy in the parents of infant. Research in Nursing and Health.

Your name: _____

Baby's name: _____

Your age: _____

Baby's age (months): _____

You are baby's (circle): mother / father

Number of children including baby: _____

Cultural background: _____

Today's date: _____

This scale has 15 items. Please underline the answer that comes closest to how you generally feel.

Here is an example already completed:

eg. I am confident about holding my baby

No, hardly ever

No, not very often

Yes, some of the time

Yes, most of the time

Office use only.

Page 1 _____

Page 2 _____+

Total _____

This would mean "I feel confident about holding my baby some of the time".

Please complete the other questions in the same way.

1. I am confident about feeding my baby

Not applicable (my partner feeds the baby)

No, hardly ever

No, not very often

Yes, some of the time

Yes, most of the time

2. I can settle my baby

No, hardly ever

No, not very often

Yes, some of the time

Yes, most of the time

3. I am confident about helping my baby to establish a good sleep routine

No, hardly ever

No, not very often

Yes, some of the time

Yes, most of the time

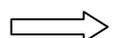
4. I know what to do when my baby cries

No, hardly ever

No, not very often

Yes, some of the time

Yes, most of the time



5. I understand what my baby is trying to tell me

- No, hardly ever
- No, not very often
- Yes, some of the time
- Yes, most of the time

6. I can soothe my baby when he / she is distressed

- No, hardly ever
- No, not very often
- Yes, some of the time
- Yes, most of the time

7. I am confident about playing with my baby

- No, hardly ever
- No, not very often
- Yes, some of the time
- Yes, most of the time

8. If my baby has a common cold or slight fever, I am confident about handling this

- No, hardly ever
- No, not very often
- Yes, some of the time
- Yes, most of the time

9. I feel sure that my partner will be there for me when I need support

Not applicable (I don't have a partner)

- No, hardly ever
- No, not very often
- Yes, some of the time
- Yes, most of the time

Reproductions of this scale must include the full scale title and reference and no alterations to wording or formatting.

Office use only:
All items scored 0,1,2,3. N/A=2.

10. I am confident that my baby is doing well

- No, hardly ever
- No, not very often
- Yes, some of the time
- Yes, most of the time

11. I can make decisions about the care of my baby

- No, hardly ever
- No, not very often
- Yes, some of the time
- Yes, most of the time

12. Being a mother / father is very stressful for me

- Yes, most of the time
- Yes, some of the time
- No, not very often
- No, hardly ever

13. I feel I am doing a good job as mother / father

- No, hardly ever
- No, not very often
- Yes, some of the time
- Yes, most of the time

14. Other people think I am doing a good job as a mother / father

- No, hardly ever
- No, not very often
- Yes, some of the time
- Yes, most of the time

15. I feel sure that people will be there for me when I need support

- No, hardly ever
- No, not very often
- Yes, some of the time
- Yes, most of the time

CONTENTS

Karitane Parenting Confidence Scale	3
Contact details	6
Preface	7
Foreword	8
Acknowledgements	10
Introduction	11
Who can administer the KPCS	12
Who can complete the KPCS	12
Administration and scoring	12
Psychometric properties and clinical cut off score	14
Practice principles	16
Normative data collection – how you can help	19
Data entry and analysis	19
Appendix 1: Karitane Parenting Confidence Scale Scoring Guide	20
Appendix 2: Clinical experience using the KPCS at Karitane	21
Appendix 3: Background and theoretical information	25
Appendix 4: KPCS development and validation process	30
Appendix 5: Psychometric and technical information	37
Appendix 6: Resources and services	44
References	45

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PREFACE

The Karitane Parenting Confidence Scale has been developed to assist in the support and development of parenting skills for parents of children 0-12 months of age. The tool has been developed in the Australian context and has been shown to be appropriate in a range of client-professional relationships. The rating scale and scoring is simple and user friendly for both client and professional.

I feel certain that this tool will greatly enhance the assessment and intervention processes for professionals working with parents of young children.

It is my pleasure to commend this work to Maternal, Child and Family Health Nurses and other professionals working with parents and young children in Australia today.

Marie Tyrrell-Clark

RN RM RMHN BSc (Nsg) Post grad Dip (Mental Health Nsg) MRCNA

President

Australian Association of Maternal Child and Family Health Nurses

FOREWORD

We now have strong scientific evidence to show that what happens to an infant in the first year of life can have lifelong significance – for good or ill. Most parents already know that, of course, just as they know they will need help with many aspects of this crucial stage in the family’s development. Where and how to obtain assistance is not always well known. Helpful suggestions are in plentiful supply, but good quality help is what is required.

In these times of scarce funding and other resources, health services are, rightly, expected to apply evidence-based strategies in their work and to evaluate the effectiveness of their interventions. Formal accreditation is unlikely to be gained if this does not occur. Karitane, like many other similar services, has embraced these principles, but Early Childhood Services have traditionally been more oriented to provision of practical help than research and evaluation.

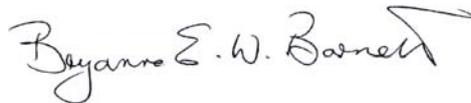
It became clear to the Board some years ago that measurement of what we offered clients in the residential unit, what they might have achieved with our help, and what other help might be required, would be assisted by systematic data collection about the problems the parents were experiencing. A paper-and-pencil scale, for example, completed pre- and post-treatment, would help parents appraise their difficulties, focus on relevant issues and see for themselves whether they had gained confidence and skills by participating in the programs offered.

A thorough review of the literature revealed that, although many potentially useful scales and questionnaires existed, none quite met our specifications so it was necessary to start at the beginning and develop a psychometrically sound scale relevant to our staff and clientele. The project was undertaken using part of a grant jointly obtained by Karitane; the Infant, Child and Adolescent Mental Health Service of Sydney South West Area Health Service, and the MARCS Auditory Laboratories at the University of Western Sydney.

The result is the *Karitane Parenting Confidence Scale*, for use by professionals who provide information and intervention to parents of infants 0-12 months of age. Unlike many available materials for such purposes, this one has been developed and tested in the Australian context.

With their usual professional dedication, Deborah Nemeth, Monica Hughes and other Karitane clinicians collaborated enthusiastically with the project. Many parents, clients of the service and parents recruited for comparison, also collaborated with great goodwill.

The meticulous work, especially by Drs Črnčec and Matthey, has produced an excellent clinical tool which will be much in demand in the setting of early parenting services. On behalf of the Board, I would like to thank and congratulate everyone involved in the project.



Bryanne E. W. Barnett AM
Chair, Karitane Board of Directors.

ACKNOWLEDGEMENTS

We would like to acknowledge the many people who have given to the development and evaluation of the KPCS. Dr Stephen Matthey and Prof Bryanne Barnett developed the initial idea for the scale and this idea was then further developed through funding initiated by Dr Stephen Malloch and Prof Denis Burnham. Research funding was obtained by this group from the University of Western Sydney (UWS) to employ a Post-Doctoral Research Fellow: A position subsequently awarded to Dr Rudi Črnčec. Specifically, funding was granted under UWS Greater Western Sydney Post-Doctoral funding initiative.

Two undergraduate students and a project officer worked on aspects of this project: Fiona Jameson, Edwina Curtis, and Brett Millar. Deborah Nemeth and other Karitane staff have contributed generously of their time and resources in contributed to the scale's development and validation. The comments of several reviewers regarding this manual were greatly appreciated, as were the patient efforts of Frances Cascio in helping with formatting for publication. Finally, we greatly appreciate the time, effort, and openness of the many parents who were involved in the KPCS validation sample.

Once we believe in ourselves, we can risk curiosity, wonder, spontaneous delight, or any experience that reveals the human spirit.

e.e. cummings

INTRODUCTION

The assessment of parents' confidence in caring for their infant has important clinical and research applications. An increasing number of studies over the past 20 years have highlighted that parenting confidence perceptions – often called 'perceived parenting self-efficacy' (PPSE) - represent a key element of parents' subjective experience, and are an important resiliency or protective factor (Jones & Prinz, 2005). High PPSE has been shown to act as a buffer against factors that can compromise a child's development, such as parental depression, anxiety, stress and relationship difficulties, and is associated with actual parenting competence and positive child outcomes (for review see Coleman & Karraker, 1997, Jones & Prinz, 2005). Clinical services for families with young children may need to assess PPSE for a variety of reasons, including screening for parenting difficulties, selection of appropriate interventions, and evaluation of interventions (Kendall & Bloomfield, 2005). Thus, psychometrically sound measures of PPSE are required in several contexts.

None of the available measures of PPSE for the parents of infants were suited to our specific clinical and research context, namely, that of a public parentcraft (formally mothercraft) hospital in outer metropolitan Sydney: Karitane, *Caring for Families*. With regard to PPSE, our staff expressed a need for a short, task-based, theoretically derived, PPSE measure that could be used for screening, assessment and outcome evaluation in the parents of infants. Given the diverse cultural and educational backgrounds of clients attending our service, a key element of the scale was that wording and response format was straightforward and user friendly. Good psychometric properties were also of critical concern. Thus, we developed and validated a 15-item instrument: the Karitane Parenting Confidence Scale (KPCS). For further detailed background theoretical information and information regarding the process of scale development and validation, see Appendixes 4 and 5 (pp. 30 & 37).

WHO CAN ADMINISTER THE KPCS

The KPCS was developed primarily for health professionals experienced in working with parentcraft and psychosocial issues of early parenthood, including Maternal, Child and Family Health Nurses, and allied health and medical professionals.

WHO CAN COMPLETE THE KPCS

The KPCS was designed to measure PPSE in the parents of children aged 0-12 months. Validation data for the scale were gathered from mothers; however, the scale is also suitable for administration to fathers. At this stage, no translations of the KPCS are available.

ADMINISTRATION AND SCORING

The KPCS is a self-report instrument. The scale includes a preamble, thus minimal instruction is required on the part of the clinician / researcher during administration. If administering the KPCS in a face-to-face format, a brief introductory statement may be helpful. For example, “I would like you to complete this scale on how you have been feeling as a parent”. However, the KPCS may also be completed as part of a mail-out package, or while the client waits in a waiting room ahead of individual or group consultation. There is no specific minimum required period between administrations. For example, the KPCS has been successfully used as a pre-post measure within Karitane, where parents completed the scale at a 4-day interval.

Each item on the KPCS is scored 0, 1, 2, or 3, with scores summed to produce a total score. The general rule is that a *high score indicates the parent is feeling confident on that item*. Items have a common scoring order (that is, the first response option is always scored 0, the second always scored 1 etc.). Two items on the KPCS can be endorsed *not applicable*, for instance when the infant is exclusively fed by the partner (item 1), or where the respondent does not have a partner (item 9). These items are

scored 2¹. The final version of the KPCS contains 15 items with a possible range of scores of 0-45.

Where possible, after the client has completed the KPCS we suggest first checking that all items have been completed. A comment to the client that “I’ll just check whether there is anything I need to clarify” will suffice to make this check. When used in a clinical context, we also strongly recommend that the clinician spend time individually discussing with the client items on which they have indicated low confidence, or where they have given an ambiguous response (e.g., selected two responses). *As a general rule, we tend to focus on those items for which the parent has scored 0 or 1 (that is, has expressed the lowest confidence).* We might ask, for example “I notice you have indicated that you don’t feel confident very often in *such and such a situation*, could you tell me more about that?” It is also important to comment upon items where the client has indicated *high* confidence. This process is invaluable in helping to assess and formulate the client’s difficulties, and can also assist clinical services with targeting interventions.

¹ This reflects the fact that in all groups in our validation sample, approximately 1 in 5 participants on average scored below the maximum of 3 on these items.

PSYCHOMETRIC INFORMATION AND CLINICAL CUT-OFF SCORE

Detailed psychometric data for the KPCS are presented in Appendix 5 (p. 37) of this manual. In short, factor analysis revealed a three-factor structure, however, at this stage of the scale's development we would recommend using only the KPCS total score. The scale showed good internal consistency and test re-test reliability. Further, the scale's validity was indicated by acceptable correlations with other measures of PPSE and associated constructs including stress and depression.

The cut-off score for the KPCS was determined as being 39 or less. It is important to note that the KPCS is not a diagnostic tool. Thus, while parents scoring 39 or less may be experiencing low levels of parenting confidence, this does not *per se* imply any formal 'disorder' (see Table 1).

TABLE 1
Clinical cut-off scores and clinical range specifiers² for mothers completing the KPCS³

Range	Score
Non-clinical range	40 or more
<i>Mild</i> clinical range	36-39
<i>Moderate</i> clinical range	31-35
<i>Severe</i> clinical range	31 or less

Whilst the KPCS cut-off score was derived within our sample to be 39 or less (see Appendix 5, p. 37), within clinical and evaluation settings it may be more practical to target clients scoring within the *Moderate* and *Severe* clinical range (35 or less).

² Each specifier range is the size of one standard deviation of the distribution of KPCS scores as determined from the validation sample.

³ As validation data have not been collected from fathers, clinical cut-off scores cannot as yet be recommended.

The reliable change index (RCI: Jacobson & Truax, 1991) is thought to be a good method for calculating the number of points change required for a clinician to be confident that a difference in scores is not due to measurement error (Matthey, 2004). This is an important question, as a change in score of 1 or 2 points is sometimes (incorrectly) taken to signify meaningful improvement or deterioration on a scale. Using the Jacobson and Truax approach, the RCI on the KPCS was found to be six points. *That is, for a given client, a change in KPCS score by six points or more indicates reliable change in their level of PPSE⁴.* For further information see Appendix 5 (p. 37). Note that these receiver operating characteristics were determined with mothers only, and further research will be required to determine specific values for fathers.

⁴ Given the KPCS' reliable change index (RCI: 6 points) is equivalent to the difference between the highest possible KPCS score (45) and the scale cut-off score (39 or less), clients who initially score in the mild clinical range 36-39 are unlikely to be able to show reliable positive change to their KPCS score. They will, however, be able to move from the clinical- to non-clinical range. This feature of the scale's RCI and cut-off should be borne in mind in outcome evaluation studies, and presents a further advantage of using a 35 or less cut-off (i.e. Moderate clinical range)

PRACTICE PRINCIPLES

Deborah Nemeth (Clinical Nurse Consultant – Child & Family Health, Karitane)

Monica Hughes (Coordinator, Karitane Education & Research Department)

The KPCS explores a range of parenting issues that may require intervention and support from health professionals. There are several key principles that underpin effective assessment and management planning. In this section, we provide an overview of known principles for working effectively with families with young children upon which specific strategies tailored to the needs of families can be based. Many of these principles are appropriate for application across the spectrum of parenting issues included in the KPCS.

Work in partnership with families

Working in partnership with families is fundamental to the provision of effective support to families experiencing parenting difficulties. By building a relationship of trust - including acknowledgement of the parents' strengths and knowledge of their infant - throughout assessment, planning, implementing treatment and reviewing progress, clinicians have the opportunity to enhance parents' problem solving abilities, self-esteem, and self-efficacy, facilitating their interaction with their children, and hence fostering their development and well-being (Davis, Day & Bidmead, 2002).

Aim to build parental confidence

In all interactions and intervention, building parental confidence has the potential to have enduring positive effects. By using a strengths-based approach and building upon parents' confidence in dealing with particular challenges, parents can be empowered to cope with future challenges and situations, including having the confidence to call upon and accept help if necessary in the future and allowing them to make decisions regarding the care of their child.

Use attachment theory as a framework

Attachment theory provides clinicians with a framework for working with families with young children. This theory guides the choice of information provided to parents to build upon their understanding of infant communication and cues. The theory also influences the clinician's approach to building not only a positive parent-infant relationship, but also a positive clinician-parent relationship. Specifically, attachment theory highlights the clinician's role in providing a 'secure base' for the parent.

The importance of assessment

To identify appropriate clinical interventions and services, clinicians need to base their decisions on thorough assessment. Comprehensive assessment is crucial to the effectiveness of any clinical intervention and the continued engagement of a family with the service. While some of the issues identified through the administration of the KPCS might at first glance appear simple, they are often intertwined with other issues that can also result in undermining of parental confidence. Thus, where concerns are raised through administration of the KPCS, further assessment is indicated.

Additional assessment could include investigation of the variety of factors that may be influencing the family's current situation and particularly the relationship between the infant and parent. These factors include parent and child physical health, parental mental health, and stressors and social supports available to the family and extended family. By exploring and clarifying these issues and their relationship to the parents' presenting concerns, clinicians can then provide appropriate support and information, and identify referral pathways to best meet the needs of both infants and their parents.

Take a holistic family-centred approach

The infant and parent need to be seen within the context of the broader family unit. Holistic assessment and intervention is to be aimed for, with particular awareness of the need to be intentionally father-inclusive, as well as inclusive of other major supports and family influences (e.g. grandparents, siblings).

Take a multidisciplinary approach

The many issues and stressors impacting on families are often best addressed by drawing upon the skills of clinicians from a variety of professional backgrounds. This may include child and family health nursing and sub-specialties (e.g., lactation), psychology, social work, psychiatry, paediatrics, general practice, speech pathology, occupational therapy, and physiotherapy. Services from primary, secondary and tertiary levels should strive to work together, supporting one another through the timely sharing of information.

Provide a range of flexible strategies

In contemporary child and family health practice there is a range of evidence-based practices available for use in the management of common parenting difficulties. Thus, we are now in a position where intervention can be largely individualised to meet the unique needs of each family. Parents and clinicians can work together to identify the most appropriate option to suit their circumstances. Strategies and interventions should be flexible and regularly reviewed in partnership with parents to identify progress made or changes required.

Provide normative information

Provision of education and information on child behaviour, growth and developmental stages can assist in normalising parental expectations. Anticipatory guidance also has a significant role in the prevention of the anxiety and stress associated with having unrealistic expectations of children's behaviour and of the parenting role.

NORMATIVE DATA COLLECTION – HOW YOU CAN HELP

An important step in the development of the KPCS is the collection of normative data. In other words, we aim to determine what specific KPCS score one should expect for the parent of a one-month-old, a four-month-old, an eleven-month-old etc. In order to obtain these data, the KPCS needs to be administered to a large number of participants. This is where you and your service may be able to help. We will be in touch with those who have received this manual and will provide further information about this project, and how you can be involved should you choose.

DATA ENTRY AND ANALYSIS

A sample data entry Excel spreadsheet is included with this manual. For those who are unfamiliar with data entry and analysis, this file should serve as a guide to constructing a data entry spreadsheet suited to their service/project. The Excel file also includes some ideas for KPCS data analyses incorporating the scale's reliable change index.

An automated Excel spreadsheet that scores KPCS forms and provides a comprehensive basic analysis of pre-post KPCS scores is available free of charge, upon emailed request, from the first or third author. This spreadsheet is not modifiable, however it automatically calculates the number of clients seen, the number in the clinical range pre-to-post, reliable change index related improvements or deterioration, as well as providing associated graphs. This spreadsheet performs similar analyses for the Edinburgh Postnatal Depression Scale. This spreadsheet may suit those with a working understanding of Excel who would like basic pre-post analyses conducted automatically. A brief manual describing the use of the spreadsheet will be provided with the spreadsheet. Note that pre and post KPCS data needs to be entered into the spreadsheet at the same time. That is, one cannot enter pre data, then at some later time come back and enter post data.

Appendix 1

BRIEF USE, SCORING, AND INTERPRETATION GUIDE

Who can use the KPCS?

Health professionals with experience in assessing and managing parentcraft and psychosocial issues of early parenthood (e.g., Maternal, Child and Family Health Nurses).

Who can complete the KPCS?

Mothers and fathers of infants aged 0-12 months.

Administration

The KPCS is a paper and pencil self-report measure. Discuss with the client any items on which they indicate low confidence (i.e., a score of 0 or 1). Also comment on items where they have indicated more confidence.

Scoring

Each item on the KPCS is scored 0, 1, 2, or 3. There are no reverse-scored items and items have a common scoring order. That is, for each item the first response is scored 0, the second 1, and so on. Items marked *not applicable* are scored 2. Scores are then summed to give a total score (range = 0-45).

Interpreting scores

The clinical cut-off for the KPCS is 39 or less. That is, clients scoring 39 or less are showing clinically significant low levels of parenting confidence. The reliable change index for the KPCS, that is, the change in scores necessary for the clinician to be certain that a client has shifted in their level of confidence, is 6 points.

Appendix 2

CLINICAL EXPERIENCE USING THE KPCS AT KARITANE

Deborah Nemeth (Clinical Nurse Consultant – Child & Family Health, Karitane)

Monica Hughes (Coordinator, Karitane Education & Research Department)

The KPCS was recently implemented at the Karitane Residential Unit, a state-wide tertiary referral service for families experiencing complex parenting difficulties that require additional intensive support. The KPCS was implemented in 2007 as part of a Clinical Practice Improvement (CPI) project that focused on the review and development of assessment tools and processes.

The initial trial of the KPCS sought to draw on the opportunity provided by the scale to enhance the assessment process as well as provide post-intervention outcome data. The KPCS was administered by the admitting nurse when the family first arrived and was repeated prior to the discharge planning consultation on Day 4 of the 5-day / 4-night admission. The aim of repeating the KPCS was to measure changes in parents' confidence and to help inform discharge planning by identifying areas in which the family required additional post-discharge support and referrals. As indicated in Appendix 4 (p. 30), clients of the Karitane residential unit, on average, showed significant improvements in their confidence over the course of the admission.

Clinical Practice Benefits: Enhancing Assessment

Feedback about the KPCS from clinicians was positive from early stages of the CPI trial. Clinicians and clients were familiar with the format of the KPCS, which is set out in a manner similar to other assessment and screening tools commonly used in the service, and this promoted staff confidence in using the scale.

Staff embraced the opportunity to utilise information provided by the KPCS. By administering the measure and then exploring responses with the parent, important information was gained to assist in management planning, and insight

afforded into the particular areas in which parents felt they were struggling and required additional information, resources and support. The KPCS was used in conjunction with other assessment tools developed through the CPI project, including: 1) child, maternal and family history forms; 2) ‘Goals of Admission and Agreed Plan’ form, which is completed and signed by both the parent and nurse; and 3) the psychosocial clinical interview form, which explores complex issues that may be impacting on the parenting relationship (Nemeth & Simpson, 2007).

In short, the exploration of parents’ responses to the KPCS provided an opportunity to: 1) better understand the family and their concerns; 2) work in partnership with parents around clarifying goals; 3) plan and implement strategies tailored to each family’s unique needs; and 4) review progress.

Discharge Planning and Measuring Outcomes: Building Confidence

While previous research has indicated positive child and maternal outcomes following admission to the residential unit (Phillips & Nemeth, 2006; Matthey & Nemeth, 2004; Matthey & Speyer, in press), clinicians had expressed a desire for outcome measurement to become a part of ongoing routine practice at the service. The KPCS has helped to meet this goal.

The KPCS provides a record of the client’s progress in terms of their confidence perceptions in particular areas. This helps clients to plan for their discharge and promotes reflection on their journey thus far. The ease of completing a scale, set out as it is in a similar format to those parents have previously encountered, also enables parents to consider their feelings and confidence in relation to various aspects of parenting with minimal distraction. Another important element to the building of parental confidence has been meeting with a clinician following the repeat administration of the KPCS. At this time, clinicians are able to encourage parents by focusing on their strengths, noting changes in responses to the KPCS from admission, and also discussing appropriate resources and services to provide further support to the family following discharge.

Staff Morale Effects

Importantly, clinicians of this short-term service were able to measure changes in a parent's confidence following intervention using the KPCS and celebrate gains with clients. The following comments from clinicians demonstrate both the important role the KPCS can play in individual management and service planning, but also in potentially enhancing staff morale, and job satisfaction.

It allows us to compare between admission day and the day they are getting ready to go home so that during the discharge discussions we can reinforce any areas in need and address these. And also boost Mum's confidence because we try to look at the positive points and to reassure Mum. If her confidence levels are increased she might also be able to find ways herself of addressing other issues in the future. Clare

It's very easy to use and understand. The KPCS highlights specific areas... It allows us to highlight certain areas straight away. For instance, I might say I noticed that you put down that you feel stressed about looking after your baby and you don't feel confident in this area. It highlights this straight away. A relatively high score may not necessarily mean that they are confident overall as parents either, for instance a total score of 40 may include a score of 0 around a particular issue. It might tell you a particular area that needs work, whereas people who are very much lacking in confidence – you do see that straight away too. Thelma

The KPCS gives us good insight into where parents are at. Because the areas are broken up individually, I now know the particular areas in which the parent feels they are lacking support and confidence. Karen

As far as the professional workers are concerned, it also boosts our confidence too. Among the staff we are so happy that during the period we have been working with the parents we can make a difference to their confidence. Through the KPCS we can see that the work that we have done with the family and also the

things we have discussed with the parents have helped to increase their confidence levels. Clare

It's really powerful because it's a solid piece of evidence that they filled out themselves showing you that they feel differently – so it's very powerful! Thelma

Future work

The KPCS has now been fully integrated into the Residential Unit program, with scores reported at hand-over of shifts and reported as an indicator of support requirements during discussion at multi-disciplinary case conferences. Data are routinely collected and analysed as a clinical outcome indicator. Approval has been given to expand upon the current use of the KPCS and commence post-discharge administration of the tool to ascertain whether improvements demonstrated on Day 4 of the admission are sustained following return to the home environment. Such longer-term effects have been previously demonstrated in longitudinal outcomes studies of residential unit client cohorts (Phillips & Nemeth, 2006).

Appendix 3

BACKGROUND AND THEORETICAL INFORMATION

Self-confidence is usually conceived of as a relatively global and stable personality characteristic relating to feelings of personal likelihood to succeed and cope. In this instance, we are interested in confidence related to the specific task of parenting a young infant. Task specific self-confidence judgements have captured a considerable amount of attention in research literature (cf. Bandura, 1997). Findings spanning a diverse range of topics and populations have consistently demonstrated that individuals possessing low and high estimations of their confidence to perform a particular task exhibit distinct affective, motivational, and cognitive reactions to the task situation, as well as discrepant behavioural responses (Coleman & Karraker, 1997). In general, people with a high sense of self-confidence in their ability to perform a particular task tend to trust their own abilities in the face of environmental demands, conceptualise problems more as challenges than as threats, experience less emotional arousal when engaged in challenging tasks, and persevere in the face of difficult situations (Jerusalem & Mittag, 1995). It is no different when it comes to caring for a young infant.

Perceived parenting self-efficacy

Studies emanating from different theoretical traditions and professions have explored this idea of parenting confidence. For example, researchers examining maternal role attainment (Mercer & Ferketich, 1994; Walker & Montgomery, 1994) and predictors of parenting competence and well-being (Gibaud-Wallston, 1977), as well as those working within a Bandurian self-efficacy framework (Ardelt & Eccles, 2001), have reported that parents' confidence in their parenting ability is a key factor in predicting a range of parent and child outcomes (cf. Jones & Prinz, 2005). Given the diverse pedigree of research in this area, different terminology has been used to describe this construct in the literature, including:

self-efficacy, parenting confidence, parenting self-agency, parenting self-definition, parental sense of competence, and parenting self-definition (Hess, Teti, & Hussey-Gardner, 2004). de Montigny and Lacharite (2005) suggest that notwithstanding the need for further research to clarify the nature of the relationship between these presumably overlapping constructs, as well as possible sub-constructs, most studies appear to be measuring a construct analogous to self-efficacy (de Montigny & Lacharite, 2005).

Perceived parental self-efficacy (PPSE) may be defined as “beliefs or judgments a parent holds of their capabilities to organise and execute a set of tasks related to parenting a child” (de Montigny & Lacharite, 2005, p. 390). The construct of self-efficacy holds considerable appeal as an organising theoretical framework for research and instrument development in this area. Indeed, self-efficacy theory is amongst the most thoroughly explicated and widely researched theories in social science (cf. Bandura, 1977; Bandura, 1997b). Moreover, Bandura has specified criteria for the construction of scales to measure self-efficacy that would likely improve the construct validity of measures (Bandura, 1997a). These criteria include the use of task-specific items, and a response format that allows participants to indicate their degree of confidence in performing the task.

Four main antecedents to self-efficacy have been articulated: 1) prior experience at the task; 2) experiencing low levels of arousal or stress when engaged in the task; 3) the opportunity to observe others perform the task, and 4) receiving positive feedback from others (Bandura, 1997b). In the context of PPSE, the social support aspects of this theory, namely, points three and four above, may be particularly relevant in affecting parents’ perceptions of their parenting ability. These aspects of self-efficacy theory concur with a long history of research suggesting the importance to parental well-being of a supportive social environment during a child’s early years (e.g., Cutrona & Troutman, 1986; Teti & Gelfand, 1991). These factors are, however, seldom addressed in contemporary scales of PPSE.

Overview of research findings

Notwithstanding measurement inconsistencies among studies, several comprehensive reviews of research in the broad area of PPSE have been conducted (Coleman & Karraker, 1997; Jones & Prinz, 2005; Sabatelli & Waldron, 1995). In the most recent of these, Jones and Prinz (2005) reported that PPSE was principally associated with the following three areas: 1) *Parental competence* - evidence in this area was considered to be strong, with many studies indicating that high PPSE is related to competent and positive parenting practices, strategies, and behaviours (e.g., Bohlin & Hagekull, 1987; Izzo, Weiss, Shanahan, & Rodriguez-Brown, 2000); 2) *Parental psychological functioning* - high PPSE is associated with lower rates of parental depression and higher satisfaction in the parenting role, and to a lesser extent with lower stress and better coping (e.g., Coleman & Karraker, 2000; Cutrona & Troutman, 1986; Dumka, Stoerzinger, Jackson, & Roosa, 1996; Gross, Conrad, Fogg, & Wothke, 1994; Scheel & Rieckmann, 1998), and 3) *Child adjustment* - low PPSE was found to be associated with child behaviour problems and socio-emotional maladjustment, and to a more limited extent with academic under-achievement and child maltreatment (e.g., Bogenschneider, Small, & Tsay, 1997; Brody, Flor, & Gibson, 1999; Peterson, Tremblay, Ewigman, & Saldana, 2003). In addition to these largely correlational studies, several authors have identified PPSE as a mediator of the effects of several historically recognised correlates of parenting quality, including maternal depression, stress, and child temperament (e.g., Bugental, Blue, & Cruzcosa, 1989; Goodnow & Collins, 1990; Johnston & Mash, 1989; Teti & Gelfand, 1991). Taken together, the accumulated body of research suggests that PPSE is an important resiliency or protective factor and is a predictor and possible mediator of parenting competence and child outcomes.

Applications and measurement issues

The measurement of PPSE has useful applications across several contexts. In addition to research aimed at elucidating correlates and predictive properties of PPSE and building theories of influences on parental functioning, clinical services may also need to assess PPSE for a variety of reasons. These include: screening for parent perceived difficulties, selection of appropriate interventions, and evaluation of interventions (Kendall & Bloomfield, 2005). Many services working with the families of young children aim to empower parents, that is, to improve parents' confidence in their parenting ability. Given the association between PPSE and positive parent and child outcomes, several authors have suggested utilising PPSE as a specific *target* for intervention (Coleman & Karraker, 1997; Jones & Prinz, 2005). Despite the value of measuring PPSE, and the strong theoretical properties and theory building potential of this construct, there are relatively few psychometrically strong measures presently available (for review see Črnčec, Barnett, & Matthey, under review). Those measures with the most robust psychometric properties, for example the *Parenting Stress Index – Competence Subscale* (Abidin, 1995) and the *Parenting Sense of Competence Scale – Efficacy Subscale* (Gibaud-Wallston, 1977; Johnston & Mash, 1989) have been designed with domain-general items. That is, these scales are not tailored to the tasks facing parents of a child of a particular age; rather they are suitable for a range of child ages. For example, the *Parenting Sense of Competence Scale – Efficacy Subscale* includes the item “Being a parent is manageable, and any problems are easily solved” (Gibaud-Wallston, 1977). Consequently, such domain-general scales may not prove sufficiently sensitive to the issues that face the parent of an infant, for example. Because of this, the power of studies investigating treatment effects may be affected, and the ability to enhance knowledge where PPSE is a dependent variable is compromised (cf. Lipsey, 1990). Given their high profile within the research literature and established normative information, however, such domain-general instruments to assess PPSE are being used by many clinical services.

An alternative approach to PPSE scale development, and that advocated by Bandura (1997a), involves the use of task-specific items. For example, the widely

used *Maternal Efficacy Questionnaire* (Teti & Gelfand, 1991) includes the item “When your baby is upset, fussy or crying, how good are you at soothing him or her?”. Investigators across a range of ‘self’-construct research areas have argued that task-specific measures may have greater predictive validity than domain-general measures due to their greater sensitivity (Coleman & Karraker, 2003; Marsh, Ellis, & Craven, 2002). Approximately 15 task-specific scales of PPSE are available for parents of infants (for review and critique of these instruments see Črnčec, Matthey, & Barnett, under review). Of these, the 22-item *Infant Care Questionnaire* (Secco, 2002) and the 25-item *Parental Expectations Survey* (Reece, 1992) possess the strongest overall psychometric properties. A large number of the other task-based scales currently lack adequate validity data; a number have questionable construct validity – incorporating factors other than PPSE, such as financial pressures; and many have complex wording. It is also worth noting that none of the 15 task-specific scales possess normative information or an empirically derived cut-off score or reliable change information, which could ultimately limit their use in clinical settings. Thus, while there is a seeming abundance of these measures, the quality is limited overall.

Appendix 4

KPCS DEVELOPMENT AND VALIDATION PROCESS

Focus Groups

The first author conducted five 1.5-hour focus groups with staff ($n = 45$) employed across different service tiers of Karitane. Focus groups explored staff perceptions of the specific tasks and challenges of parenting an infant aged less than 12 months and involved an examination of existing scales of PPSE. Participants included nurses, psychologists, social workers, and psychiatrists. One focus group was also completed with 17 mothers attending an outpatient mothers' group. Focus groups were audio taped and a thematic cluster analysis of group transcripts was conducted to identify key themes. There was considerable overlap and consistency between groups, with emergent themes including: feeding, settling, establishing sleep routines, interpreting cries and cues, playing and communicating, responding to needs, bathing, general care, management of minor medical illness, providing a stimulating environment, receiving positive feedback from baby and others, and perceptions of social support available from the partner and others. Note that there was consensus at these focus groups that the term 'confidence' rather than 'self-efficacy' should be included in the instrument title, as the term 'confidence' would be more meaningful and potentially less stigmatising to clients. We would stress, however, that our use of 'parenting confidence' is interchangeable with PPSE as defined above.

Item selection

Based on responses from the focus groups, an initial 18-item scale with a four-point response format was developed by the authors (responses ranged from "No, hardly ever" through to "Yes, most of the time"). Given the routine use ease of completion of the Edinburgh Postnatal Depression Scale within our service (Cox, Holden, & Sagovsky, 1987) a similar item endorsement approach was used, with participants asked to underline the response that best reflected their experience. A panel of experts ($n = 6$) who were experienced in clinical and research work with

families of young children assisted in item refinement and in confirming the face validity of the KPCS. Some final alterations to the scale were made following pilot testing of a first draft of the KPCS with 20 women (mean age 30.2 years) whose infants were aged less than 12 months recruited through Karitane. Following the validation study (described below), three items were excluded from further analyses as fewer than 5% of participants in the major difficulties group, that is, the residential unit group, were endorsing other than the most confident response category (i.e., Yes, most of the time). These three items were also endorsed less than 5% of the time in the other experimental groups, suggesting that defensive responding was not likely to be operating in the residential sample. The three excluded items were ‘I can manage my baby’s general care (e.g. bathing, changing nappy)’; ‘My baby feels safe and secure with me’; ‘My baby enjoys being with me’. A separate criterion for exclusion of items was where the inter-item correlation between two items was greater than .75. For the remaining 15 items, all inter-item correlations were less than .61 (mean = .23; SD = .14), resulting in no exclusions on this basis. Thus, the final version of the KPCS contains 15 items with a possible range of scores of 0-45, with *higher* scores indicating *greater* PPSE.

During scale development several items were reverse scored. Research within the Sydney South West Area Health Service Infant Child and Adolescent Mental Health Service Research Unit has shown, however, that this format increases the frequency of clinicians incorrectly scoring the scale. Thus in the final version, items have a common scoring order (that is, the first response option is always scored 0, the second always scored 1 etc.). We believe this change will exert a negligible impact on scale psychometrics, and this is outweighed by benefits to ease of use, scoring, and scoring accuracy. Two items on the KPCS can be endorsed *not applicable*, for instance when the infant is exclusively fed by the partner (item 1), or where the respondent does not have a partner (item 9). These items are scored 2.

KPCS VALIDATION STUDY DETAILS

Participants

A sample of 187 women aged 18 years or more and with infants aged less than 12 months were recruited to the KPCS validation sample. Four groups of women were recruited comprising a control group recruited from the community, and three clinical groups recruited from Karitane. Sample size was informed by a power calculation. According to Cohen (1992) with four groups and alpha of .05, a sample size of 45 in each group affords experimental power of .80 to detect group differences of medium effect size. Medium sized effects were considered adequate in this study, as these are likely to denote clinically meaningful differences.

Demographic data are presented below in Table 2. The *control group* ($n = 47$) was recruited from a register of women who had previously expressed interest in participating in infant research projects at the University of Western Sydney. No women in this group were receiving assistance for parentcraft or mood-related difficulties. The *early intervention group* ($n = 42$) were recruited from women who had self-referred to a one-off, two-hour, parenting class focused on preventing infant sleep and settle difficulties. The *moderate difficulties group* ($n = 55$) was recruited from women referred to a ½ day outpatient program for assistance with parentcraft issues. The *major difficulties group* ($n = 43$) was recruited from mothers attending a five-day residential parentcraft program. Families are typically referred to this program for assistance with infant feeding or sleep and settling issues that have not responded to outpatient management. Groups were well matched on demographic variables, however, the early intervention group comprised infants who were significantly younger than infants in the other three groups. Also, the early intervention and moderate difficulties groups comprised families with fewer children overall than the control and major difficulties groups. Number of children was not, however, included as a covariate in subsequent analyses given the low correlation between this variable and total KPCS score, $r(184) = .001$.

TABLE 2
KPCS validation sample demographic data

	Control (<i>n</i> = 47)	Early- intervention (<i>n</i> = 42)	Moderate- difficulties (<i>n</i> = 55)	Major- difficulties (<i>n</i> = 43)	Total sample (<i>N</i> = 187)
Mean mother's age (years)	31.5	31.8	32.9	31.6	32.0
(<i>SD</i>)	(4.5)	(4.7)	(4.5)	(5.4)	(4.8)
Mean infant age (weeks)	27.7	6.4 ^a	28.3	35.8	24.7
(<i>SD</i>)	(5.6)	(2.7)	(16.9)	(46.2)	(25.5)
Mean number of children	1.8	1.2 ^b	1.3 ^b	2.0	1.5
	(.79)	(.56)	(.58)	(1.0)	(.8)
% of male index infants	55%	57%	63%	61%	60%
% of married /defacto parents	92%	98%	96%	90%	94%
% of mothers who have not completed a University or vocational course	11%	5%	9%	8%	8%
Ethnic background (> 5% of total)	Australian - 64%	Australian - 54%	Australian - 73%	Australian - 57%	Australian - 63%
		British - 7%	New Zealand - 6%	Greek, Chilean, Chinese - 5%	

a. $F(3, 181) = 12.09, p < .001$. Least significant difference post-hoc tests indicate early-intervention group < control, major-difficulties, and moderate-difficulties groups.

b. $F(3, 183) = 10.62, p < .001$. Least significant difference post-hoc tests indicate moderate-difficulties and early-intervention groups < control and major-difficulties groups.

Measures

A demographics questionnaire was developed for the study to assess variables including participant age and cultural background. In addition, concurrent validity was established using the following four instruments:

The *Parenting Sense of Competence Scale* (PSOC) is a 17-item measure originally developed by Gibaud-Wallston (1977) as a measure of self-esteem in the parents of infants. Johnston and Mash (1989) made several alterations to the scale including renaming the original subscales to the now widely adopted ‘Efficacy’ and ‘Satisfaction’ subscales, and modifying the items to make them suitable for the parents of older children. Johnston and Mash also drew links between the Efficacy subscale and the work of Bandura (1989), and the subscale is now widely regarded as a domain-general measure of PPSE. Parents are asked to rate the extent to which they agree with statements regarding their feelings of competence (e.g. “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”). Psychometric data for the efficacy and satisfaction subscales include internal consistency (Cronbach’s alpha = .76 and .75, respectively) and 6-week total score test-retest reliability of .73. Both subscales display acceptable convergent; discriminant; and factorial validity (cf. Črnčec, Barnett, & Matthey, under review). In the validation sample, Cronbach’s alpha for the efficacy and satisfaction subscales was .81 and .80, respectively.

The *Maternal Efficacy Questionnaire* (MEQ; Teti & Gelfand, 1991) is a 10-item task-specific measure of PPSE that asks mothers to rate ‘how good’ they perceive themselves to be at performing different parenting tasks (e.g., “How good are you at getting your baby to pay attention to you? For example, when you want your baby to look at you, how good are you at making him or her do it?”). Cronbach’s

alpha was found by Teti and Gelfand to equal .86. Convergent and discriminant validity for the MEQ are acceptable (cf. Črnčec, Barnett, & Matthey, under review). Cronbach's alpha in the present sample was .79.

The *Parenting Stress Index Short Form* (PSI-sf: Abidin, 1995) is a direct derivative of the full length PSI. Like the PSI, the 36-item PSI-sf was designed to measure stress in the parent-child system. The PSI-sf consists of three subscales: parental distress, parent-child dysfunctional interaction and difficult child. The parental distress subscale reflects the distress a parent is experiencing in his or her role as a function of personal factors that are directly related to parenting. These factors include perceived child-rearing competence, conflict with spouse or partner, social support, and stresses associated with restrictions placed on other life roles. The parent-child dysfunctional interaction subscale assesses a parent's perception that a child does not meet expectations and that interactions with the child are not reinforcing. The difficult child subscale surveys a parent's view of the behavioural characteristics of their child that make them either easy or difficult to manage (Abidin, 1995). The PSI-sf also gives a total stress score. Cronbach's alpha for the three subscales and total score range from .80 - .91, and six-month test-retest reliability range from .68 - .85. Extensive validity data for the PSI-sf are presented in the test manual (Abidin, 1995). Note that the PSI-sf and PSI total stress scores correlate at $r = .94$, and the correlation between the competence subscale of the PSI and the PSI-sf parental distress subscale is $r = .67$.

The *Edinburgh Postnatal Depression Scale* (EPDS: Cox et al., 1987) is a 10-item scale used for community screening for postnatal depression. The EPDS asks mothers to rate how they have felt in the past seven days (e.g., "I have been able to laugh and see the funny side of things"). Cronbach's alpha for the EPDS is .87 and the scale's split-half reliability is .88 (Cox et al., 1987). The EPDS has acceptable convergent, discriminant and predictive validity (Adouard, Glangeaud-Freudenthal, & Golse, 2005; Jadresic, Araya, & Jara, 1995). Cronbach's alpha was .87 in the validation sample.

Procedure

Participants were recruited by a telephone call (in the case of the control group), or by direct personal approach (in the case of the three clinical groups). Table 3 outlines the questionnaires completed by different experimental groups. Participants in the control group completed a four-week follow-up to determine the test-retest reliability of the KPCS. The major difficulties group completed a post-intervention KPCS following a five-day residential admission.

TABLE 3
Measures completed by participants in the KPCS validation sample

	Control	Early intervention	Moderate difficulties	Major difficulties
Demographics	✓	✓	✓	✓
Karitane Parenting Confidence Scale	✓	✓	✓	✓
Parenting Sense of Competence Scale (Gibaud-Wallston, 1977)	✓	✓	✓	✓
Maternal Efficacy Questionnaire (Teti & Gelfand, 1991)	✓		✓	
Parenting Stress Index – Short form (Abidin, 1995)	✓			
Edinburgh Postnatal Depression Scale (Cox et al., 1987)	✓	✓		✓
Karitane Parenting Confidence Scale 4-week test-retest	✓			
Karitane Parenting Confidence Scale post residential admission				✓

Appendix 5

PSYCHOMETRIC AND TECHNICAL INFORMATION

Factor analysis

The factor structure of the KPCS was examined using principal components factor analysis, with a varimax rotation. There were no outliers, four cases of missing data were replaced with the mean score, and evaluation of assumptions was generally satisfactory, although some items showed moderate positive skewness. Sample size was adequate with 12.5 participants per item (Nunnally, 1978). The un-rotated principal components solution was composed of four factors with eigenvalues greater than one, and explained 56.6% of the total variance. The more discriminating scree plot (Cattell, 1966) suggested a three-factor solution. The best structure interpretation was a three-factor specified solution with a varimax rotation. This solution explained 49.3% of the total variance and comprised a large first factor explaining 30.1% of the variance. Items were retained within a factor where minimum factor load strength of .40 was achieved. Item 3 (“I am confident about helping my baby to establish a good sleep routine”) was a ‘complex’ item, loading onto both the first (.50) and second (.41) factors. This item was retained in the scale given its critical face validity regarding clients presenting to our service. The component loadings, communalities (h^2), and percentage of variance explained after varimax rotation are shown in Table 4.

TABLE 4
Varimax rotated component loadings for KPCS items

Item	Factors			h^2
	1	2	3	
Understand baby's signals	.73	-	-	.64
Know what to do when baby cries	.72	-	-	.59
Soothe baby when distressed	.68	-	-	.57
Settle baby	.67	-	-	.55
Handling cold or minor illness	.63	-	-	.41
Playing with baby	.61	-	-	.37
Establish good sleep routine	.50	.41	-	.41
Make decisions about care of baby	.47	-	-	.40
Feel sure about support from others	-	.71	-	.51
Feel doing a good job as mother/father	-	.70	-	.63
Feel sure about support from partner	-	.60	-	.42
Other people believe doing a good job	-	.55	-	.36
Being a mother / father is very stressful	-	.55	-	.44
Baby is doing well	-	-	.76	.67
Feeding baby	-	-	.68	.49
% of variance	30.14%	11.10%	8.08%	49.32%
Label	Parenting	Support	Child development	

Note: Component loadings of less than .40 have been suppressed.

As can be seen from Table 4, variables loading on component one seemed to be concerned with perceptions of parenting ability, component two with perceptions of available parenting support, and component three with perceptions about child development. These three factors were thus labelled as ‘parenting’, ‘support’ and ‘child development’. Nevertheless, since the KPCS was designed to assess the unidimensional construct of PPSE, and given factor score-to-total score correlations for the parenting, support, and child development factors were moderate-to-strong, that is .91, .73, and .47 respectively, the KPCS was considered to provide a unidimensional measure with three underlying subscales. Until the validity of this factor structure is replicated, however, we would recommend using only the KPCS total score.

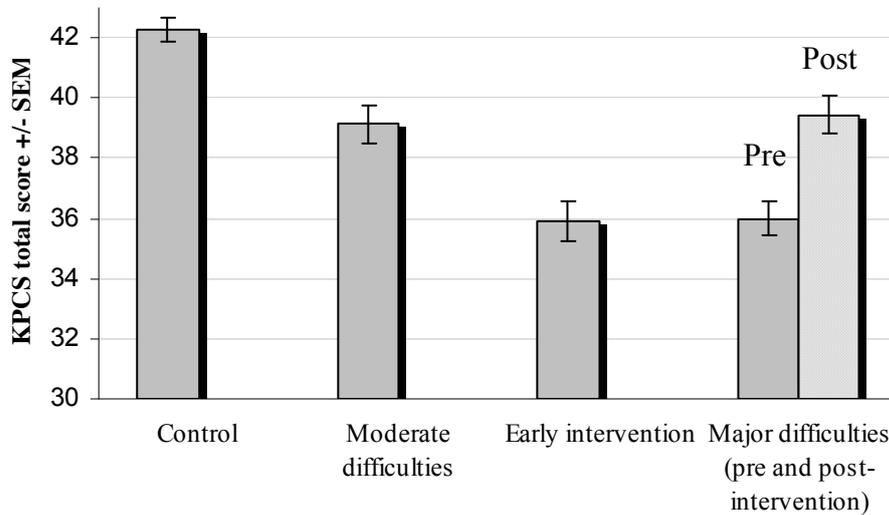
Scale reliability

An internal consistency of greater than .70 is thought to be necessary for a new psychological scale (Nunnally, 1978). Cronbach’s alpha for the KPCS total score was .81. The parenting, support, and child development subscales had Cronbach’s alphas of .80, .64, and .44, respectively. 27 clients in the control group completed the KPCS four weeks after initial administration (mean = 28 days, SD = 10.39 days). All of these clients reported no major stressors or changes during the period between first and second administrations. Test-retest reliability was $r(26) = .88, p < .001$.

Discriminant validity

Discriminant validity of the KPCS was established using two analyses. First, KPCS total scores for the four experimental groups were analysed with a one-way analysis of variance (ANOVA). The ANOVA test assumptions were found to be satisfactory, excepting the homogeneity of variance assumption. Thus, Games-Howell tests were utilised when exploring post-hoc group differences. The ANOVA result was statistically significant $F(3, 183) = 26.66, p < .001$. Post-hoc comparisons revealed that the control group was scoring significantly higher (i.e. had greater PPSE) than the three clinical groups (all $ps < .001$). Further, the moderate difficulties group was scoring higher than the major difficulties and early intervention groups ($ps < .01$). Note that the major difficulties and early intervention groups did not achieve KPCS scores significantly different from one another. These data are presented graphically in Figure 1.

FIGURE 1
Total KPCS Score by Experimental Group



Games-Howell post-hoc tests indicate control > moderate-difficulties, major-difficulties, and early-intervention groups ($ps < .001$), and moderate-difficulties > major-difficulties and early-intervention groups ($ps < .01$). Paired sample t -test indicates a significant difference between pre- and post-intervention scores for the major-difficulties group ($p < .001$).

Second, discriminant validity was further explored by examining pre- and post-intervention KPCS scores for clients attending a five-day residential program using a dependent t test. Assumptions of normality for this analysis were met. Results indicated a statistically significant difference between pre- and post-intervention scores, $t(27) = 6.49, p < .001$. See Figure 1.

Convergent validity

Convergent validity was established by examining correlations between the KPCS total and subscale scores, and scores on other dependant measures utilised in the study (see Table 5 for full details). KPCS total scores were associated in the appropriate direction with: 1) both the domain-general and task-specific measures of PPSE, that is, the *Parenting Sense of Competence Scale – Efficacy Subscale* and the *Maternal Efficacy Questionnaire*; 2) parenting satisfaction as measured by the *Parenting Sense of Competence Scale – Satisfaction Subscale*; 3) depression as measured by the *Edinburgh Postnatal Depression Scale*; and 4) three indices from the *Parenting Stress Index – Short Form*, namely, total parenting stress, parental distress, and difficult child.

TABLE 5
Correlations between KPCS total and subscale scores and other dependent measures

	1	2	3	4
1. KPCS total score				
2. KPCS parenting	.91**			
3. KPCS support	.73**	.42**		
4. KPCS child development	.47**	.29**	.20**	
5. PSOC efficacy	.55**	.45**	.46**	.30**
6. PSOC satisfaction	.56**	.40**	.56**	.28**
7. MEQ	.62**	.56**	.42**	.22
8. EPDS	-.56**	-.33**	-.62**	-.35**
9. PSI-sf total	-.63**	-.41**	-.62**	-.19
10. PSI-sf parental distress	-.68**	-.40**	-.68**	-.32*
11. PSI-sf parent-child dysfunctional interaction	-.29	-.18	-.30*	-.06
12. PSI-sf difficult child	-.39**	-.31*	-.37**	.02

Note: ** Correlation is significant at the $< .01$ level (2-tailed); * Correlation is significant at the $< .05$ level (2-tailed). As indicated in Table 2, each experimental group completed a sub-set of questionnaires. Therefore, the sample size contributing to correlation coefficients presented varies. KPCS = Karitane Parenting Confidence Scale; PSOC = Parenting Sense of Competence Scale; MEQ = Maternal Efficacy Questionnaire; EPDS = Edinburgh Postnatal Depression Scale; PSI-sf = Parenting Stress Index – short form.

Cut-off score and reliable change index

The receiver operating characteristics of the KPCS were examined by contrasting the clients in the major difficulties group (considered to be ‘true cases’ of clinically low PPSE) with those in the control group (considered to be ‘non-cases’). A cut-off of 39 or less was found to be optimal. Using this cut-off, the *sensitivity* of the KPCS, that is, the total number of ‘true cases’ correctly identified was 86%. The *specificity*, or total number of ‘non-cases’ correctly identified was 89%. The *positive predictive value*, that is, the percentage of the sample scoring above the cut-off who were true cases, was 88%. The *negative predictive value*, that is, the percentage of the sample scoring below the cut-off who were true non-cases, was also 88%. Overall, only 12% of the sample was misclassified using a 39 or less cut-off.

The reliable change index (RCI: Jacobson and Truax, 1991) is thought to be a good method for calculating the number of points change required for a clinician to be confident that a difference in scores is not due to measurement error (Matthey, 2004). Using the formula, $RCI = (\chi_2 - \chi_1) / S_{diff}$, with an RCI of >1.96 , indicating that the difference in scores is likely to be a real difference (95% confidence level), the reliable change index on the KPCS for those participants in the clinical groups was found to be six points. That is, for a given client, a change in KPCS score by six points or more indicates reliable change in their level of PPSE. Where this change also moves the client from scoring 39 or less (that is, below the cut-off on the KPCS) to 40 or more, that client can be also be considered to now be in the non-clinical range. Clients who score 39 or less, and whose KPCS score rises by six or more points but does not rise to a score of 40 or more, may be considered to have shown an improvement, but to still be in the clinical range.

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Website: (Use Health Website)
[http://www.health.qld.gov.au/
rch/families/cchs_rsp.asp](http://www.health.qld.gov.au/rch/families/cchs_rsp.asp)

SOUTH AUSTRALIA

Torrens House Hospital (Children Youth & Women's Health Service)

295 South Terrace Adelaide SA 5000
Telephone No: (08) 8303 1500
Fax No: (08) 8303 1656
Parent Help Line: 1300 364 100
Website: www.cyh.com.au

TASMANIA

Child Health and Parenting Service

13 Mulgrave Street, Launceston TAS 7250
Telephone No: (03) 6336 2138
Fax No: (03) 6336 2137

VICTORIA

O'Connell Family Centre

6 Mont Albert Road, Canterbury VIC 3126
Telephone No: (03) 8416 7600
Fax No: (03) 9816 7929
Website: www.mercy.com.au

The Queen Elizabeth Centre

53 Thomas Street, Noble Park VIC 3174
Telephone No: (03) 9549 2777
Fax No: (03) 9549 2779
Parenting Telephone Advice Line 24 hour
Service No: 132229
Parent Line No: 132289
Website: www.qec.org.au

Tweddle Child & Family Health Service

53 Adelaide Street, Footscray VIC 3011
Telephone No: (03) 9689 1577
Fax No: (03) 9689 1922
Website: www.tweddle.org.au

WESTERN AUSTRALIA

Ngala Family Resource Centre

9 George Street, Kensington WA 61510
Telephone No: (08) 9368 9368
Fax No: (08) 9368 9361
Parents Help Line: 1800 111 546 or
(08) 9368 9368
Website: www.ngala.com.au

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