Quality Improvement Center ON EARLY CHILDHOOD

Parents' Assessment of Protective Factors

User's Guide and Technical Report

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Center for the Study of Social Policy

Children's Bureau

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Parents' Assessment of Protective Factors Survey: User's Guide and Technical Report

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This guide and other documents about the National Quality Improvement Center on Early Childhood and the Strengthening Families Approach and Protective Factors Framework are available at www.cssp.org

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Table of Contents

Appendices

Conceptual Background

Introduction

The Parents' Assessment of Protective Factors (PAPF) was developed as a measure to assess the presence, strength, and growth of parents' self-reported beliefs, feelings, and behaviors that are regarded as indicators of the Strengthening Families™ Protective Factors. Please note that throughout this *User's Guide and Technical Report*, the term, "parent," is used to refer to an adult or adolescent who has responsibility of rearing a child, including the biological parents, grandparents, other relatives, or non-biological caregivers.

The Strengthening Families Approach and Protective Factors Framework™—developed by the Center for the Study of Social Policy—is a research-informed, strengths-based, two-generation initiative to build family strengths and a family environment that promotes optimal child development and reduces the likelihood of child abuse and neglect. Five *protective factors* are the foundation of the Strengthening Families approach.

Protective factors are defined in this context as *conditions or attributes of individuals, families, communities, or the larger society that both mitigate risk factors and actively enhance well-being.*

The protective factors within the Strengthening Families Approach are: *(a) parental resilience, (b) social connections, (c) concrete support in times of need, (d) children's social and emotional competence, and (e) knowledge of parenting and child development.*

The Five Protective Factors

The five interrelated protective factors are defined below along with indicators of how the factors may be observed (for additional details about these protective factors, see Center for the Study of Social Policy, 2013; Harper Browne, 2014a). The items in the PAPF reflect many of these indicators.

Parental Resilience

Being a parent can be a very rewarding and joyful experience. But being a parent can also have its share of stress. Parenting stress is caused by the pressures (stressors) that are placed on parents personally and in relation to their child. Numerous researchers have concluded that how parents respond to stressors is much more important than the stressor itself in determining the outcomes for themselves and their children. Parents are more likely to achieve healthy, favorable outcomes if they demonstrate resilience.

Parental Resilience is the process of managing stress and functioning well when faced with stressors, challenges, or adversity. The outcome of parental resilience is personal growth and positive change.

Parental Resilience includes:

- calling forth the inner strength to proactively meet personal challenges and those in relation to one's child, manage adversities, and heal the effects of one's own early traumas
- becoming more self-confident and self-efficacious; believing that one can make and achieve goals
- not allowing stressors to keep one from providing nurturing attention to one's child

- solving general life or parenting problems
- feeling respected and appreciated
- having a positive attitude about life in general and about one's parenting role and responsibilities
- managing anger, anxiety, sadness, feelings of loneliness, and other negative feelings
- seeking help for self or child when needed

Social Connections

People need people. Parents need people who care about them and their children, who can be good listeners, who they can turn to for well-informed advice and who they can call on for help in solving problems. Parents also need to be constructively engaged in social institutions and environments (e.g., their child's early education program, religious communities, volunteer opportunities). In addition, spiritual connectedness or spirituality is important in the lives of many parents.

Social connections are healthy, sustained relationships with people, institutions, the community, or a force greater than oneself that forge a sense of belonging, attachment, reciprocal positive regard, and a feeling that one matters.

Research studies have demonstrated that —for or both mothers and fathers—healthy and supportive social connections are associated with positive parental mood; positive perceptions of and responsiveness to one's children; parental satisfaction, well-being and sense of competence; and lower levels of anger, anxiety, and depression. Conversely, inadequate, conflicting, or dissatisfying social connections can be the source of parental stress, rather than a buffer. At the extreme end of the continuum of poor social connections are social isolation and loneliness. Social isolation is a risk factor consistently associated with disengaged parenting, maternal depression and increased likelihood of child maltreatment. Similarly, loneliness may be a major stressor that inhibits parents' ability to provide consistent, nurturing, responsive care to their children.

Supportive and satisfying social connections are valuable resources that:

- provide affiliative support (e.g., a sense of community, companionship)
- provide emotional support (e.g., empathy, affirmation of parenting skills)
- provide instrumental support (e.g., links to jobs, transportation, financial assistance)
- provide informational support (e.g., parenting guidance, recommendations for health care services)
- provide spiritual support (e.g., hope and encouragement)
- help solve problems
- help buffer parents from stressors
- reduce feelings of isolation
- promote meaningful interactions in a context of mutual trust and respect

Concrete Support in Times of Need

All parents need help sometimes—help with the day-to-day care of children, help in figuring out how to soothe a colicky baby, help in managing one's temper when fatigued or upset. When parents are faced with very trying or overwhelming conditions, they need to seek help and access to concrete support and services that address their needs and help to minimize the stress caused by very difficult challenges and adversity.

Family and child-serving programs should communicate to parents that seeking help is not an indicator of weakness or failure as a parent. On the contrary, seeking help is a step toward improving one's circumstances and learning to better manage stress and function well when faced with challenges, adversity, and trauma. When parents ask for help, it is a step toward building resilience.

Concrete support in times of need involves identifying, seeking, accessing, advocating for, and receiving needed adult, child, and family services; and receiving a quality of service designed to preserve parents' dignity and promote healthy development.

Having concrete support in times of need is demonstrated by parents:

- being able to identify, find, and receive the basic necessities everyone deserves in order to grow (e.g., healthy food), as well as specialized medical, mental health, social, educational, or legal services
- understanding their rights in accessing services
- gaining knowledge of relevant services
- learning how to navigate through service systems
- seeking help when needed
- having financial security to cover basic needs and unexpected costs

Social and Emotional Competence of Children

Early childhood is a period of both great opportunity and vulnerability. Early childhood experiences set the stage for later health, well-being and learning. In the past, most of the focus was on building young children's academic skills in an effort to ensure they were prepared for school. However, in recent years a growing body of research has demonstrated the strong link between young children's social and emotional competence and their cognitive development, language skills, mental health, and school success.

The social and emotional competence of children develops as a result of providing an environment and experiences that enable children to form close and secure adult and peer relationships, and to experience, regulate, and express emotions.

Social and emotional competence does not evolve naturally. The course of social and emotional development—whether healthy or unhealthy—depends on the quality of nurturing attachment and stimulation that a child experiences. Numerous research studies show that a relationship with a consistent, caring, and attuned adult is essential for healthy social and emotional outcomes in young children. Thus, this protective factor involves the active engagement of both parents and children.

For the parent, promoting the social and emotional competence of children includes:

- having a positive parental mood
- having positive perceptions of and responsiveness to one's child
- responding warmly and consistently to a child's needs
- being satisfied in one's parental role
- fostering a strong and secure parent-child relationship
- creating an environment in which children feel safe to express their emotions
- being emotionally responsive to children and modeling empathy
- talking with one's child to promote vocabulary development and language learning
- setting clear expectations and limits (e.g., "People in our family don't hurt each other.")
- separating emotions from actions (e.g., "It's okay to be angry, but we don't hit people when we are angry.")
- encouraging and reinforcing social skills such as greeting others and taking turns
- creating opportunities for children to solve problems (e.g., "What should you do if another child calls you a bad name?").

For the child, social and emotional competence of children involves:

- developing and engaging in self-regulating behaviors
- interacting positively with others
- using words and language skills

- communicating emotions effectively

Knowledge of Parenting and Child Development

No parent knows everything about children or is a perfect parent. An understanding of parenting strategies and child development helps parents understand what to expect and how to provide what children need during each developmental phase. All parents, and those who work with children, can benefit from increasing their knowledge and understanding of child development.

What parents do and how they treat children is often a reflection of the way they were parented. Acquiring new knowledge about parenting and child development enables parents to critically evaluate the impact of their experiences on their own development and their current parenting practices, and to consider that there may be more effective ways of guiding and responding to their children.

Knowledge of parenting and child development involves understanding the unique aspects of child development during different ages and stages, and implementing developmentally and contextually appropriate best parenting practices.

Characteristics of this protective factor include seeking, acquiring, and using accurate and age and stage-related information about:

- the importance of
    - being attuned and emotionally available to one's child
    - being nurturing, responsive, and reliable
    - regular, predictable, and consistent routines
    - interactive language experiences
    - providing a physically and emotionally safe environment for one's child
    - providing opportunities for one's child to explore and to learn by doing
- parental behaviors that lead to early secure attachments
- appropriate developmental expectations
- positive discipline techniques
- recognizing and attending to the special needs of a child

Rationale for Development of a New Protective Factors Inventory

The PAPF was originally developed for use by the research and demonstration (R&D) projects of the National Quality Improvement Center on Early Childhood (QIC-EC). The four R&D projects tested evidence-based and evidence-informed approaches that build protective factors and reduce risk factors in order to promote optimal child development, increase family strengths, and decrease the likelihood of abuse and neglect among young children (see Harper Browne, 2014b).

In the search for appropriate common measures for the R&D projects, it was found that there were various instruments that assessed some of the indicators of the Strengthening Families protective factors, but there was not a single instrument that was designed to measure the presence, strength, and growth of all five factors. In addition, many parent assessment tools focused on the identification of parents' problems and weaknesses (Early, 2001). An emphasis on deficits tends to obscure the recognition of parents' strengths and capabilities that could serve as resources for addressing family challenges.

Epstein (2004) emphasized the importance of strengths-based assessment and interventions and service plans based on individual and family strengths. He defined strengths-based assessment as "the measurement of those emotional and behavioral skills, competencies,

and characteristics that create a sense of personal accomplishment; contribute to satisfying relationships; . . . enhance one's ability to deal with adversity and stress; and promote one's personal, social, and academic development" (p. 4).

The strengths-based assessment tools that were identified were "mainly directed towards the assessment of strengths within the family as a unit rather than individuals within the family, although many tools rely on self-report from a limited number of family members" (White, 2005, p. 23). Thus, a new strengths-based instrument—originally called the "Caregivers' Assessment of Protective Factors"—was developed for preliminary use by the research and demonstration projects to measure individual parents' perceptions of their strengths.

It is important to note that a strengths-based perspective does not ignore or minimize the real problems that individuals, families, or communities may be experiencing (Maton, Dodgen, Leadbeater, Sandler, Schellenbach, & Solarz, 2004). Rather, with a strengths-based assessment perspective, failure to demonstrate a strength is not conceived as a deficit but as an opportunity to provide experiences that enable an individual to build or reinforce a specific skill, competence, or attribute (Epstein, 2004).

2

The Parents' Assessment of Protective Factors Instrument and Composition of the Protective Factors Subscales

Parents' Assessment of Protective Factors Instrument

The PAPF is designed specifically to measure the presence, strength, and growth of parents' self-reported beliefs, feelings, and behaviors that are regarded as indicators of the Strengthening Families protective factors.

The PAPF was developed from review of the items of many existing measures, such as the Parenting Scale, Parenting Sense of Competence Scale, Perceived Stress Scale, Parenting Skills Assessment, Social Support Questionnaire, and Parental Nurturance Scale.

The PAPF was developed in several phases. Phase 1 was development of the item pool, cognitive testing of that item pool, and pilot testing of items, from which the instrument for the first field test in Phase 2 was constructed. Phase 2 consisted of two field tests of instruments that were constructed based on the psychometric analyses of the items in the preceding instruments. Phase 3 consisted of construction of the released version of the PAPF and publication of the *User's Guide and Technical Report*, which provides a guide for the administration, scoring, interpretation, and use of the PAPF and documents the development and validation process. The development of the PAPF is described in Chapters 6 and 7 of this *Guide*.

The PAPF consists of 36 items (i.e., parent statements) measuring four of the five Strengthening Families protective factors. Item analyses and other explorations of the psychometric properties of the field test instruments, including exploratory and confirmatory factor analyses, consistently indicated that the subscale, "Knowledge of Parenting and Child Development", was not adequately measured by the selected items. Due to the need for a valid and reliable measure of the Strengthening Families protective factors, a decision was made to release an instrument that provides very good estimates of parents' strengths and needs with regard to the other four protective factors, while continuing work on developing a valid and reliable measure of the Knowledge of Parenting and Child Development protective factor.

Composition of the Protective Factors Subscales

The resulting PAPF instrument is an inventory of 36 items measuring four of the five Strengthening Families protective factors (nine items/parent statements per factor): parental resilience, social connections, concrete support in times of need, and social and emotional competence of children. In addition, the instrument gathers information on the background characteristics of a parent. The instrument is provided in Appendix A. The items/parent statements that are related to each of the four protective factors are grouped together and are referred to as a "subscale." The items in each subscale are listed below.

Parental Resilience (PR)

- I feel positive about being a parent/caregiver.
- I take good care of my child even when I am sad.
- I find ways to handle problems related to my child.
- I take good care of my child even when I have personal problems.
- I manage the daily responsibilities of being a parent/caregiver.
- I have the strength within myself to solve problems that happen in my life.
- I am confident I can achieve my goals.
- I take care of my daily responsibilities even if problems make me sad.
- I believe that my life will get better even when bad things happen.

Social Connections (SC)

- I have someone who will help me get through tough times.
- I have someone who helps me calm down when I get upset.
- I have someone who can help me calm down if I get frustrated with my child.
- I have someone who will encourage me when I need it.
- I have someone I can ask for help when I need it.
- I have someone who will tell me in a caring way if I need to be a better parent/caregiver.
- I have someone who helps me feel good about myself.
- I am willing to ask for help from my family.
- I have someone to talk to about important things.

Concrete Support in Times of Need (CS)

- I don't give up when I run into problems trying to get the services I need.
- I make an effort to learn about the resources in my community that might be helpful for me.
- When I cannot get help right away, I don't give up until I get the help I need.
- I know where to go if my child needs help.
- I am willing to ask for help from community programs or agencies.
- I know where I can get helpful information. about parenting and taking care of children.
- Asking for help for my child is easy for me to do.
- I know where to get help if I have trouble taking care of emergencies.
- I try to get help for myself when I need it.

Social and Emotional Competence of Children (SE)

- I maintain self-control when my child misbehaves.
- I help my child learn to manage frustration.
- I stay patient when my child cries.
- I play with my child when we are together.
- I can control myself when I get angry with my child.
- I make sure my child gets the attention he or she needs even when my life is stressful.
- I stay calm when my child misbehaves.
- I help my child calm down when he or she is upset
- I am happy when I am with my child.

After administration of the PAPF, the following scores can be derived:

- A total score
  - Protective Factor Index (PFI)

- Subscale scores
  - Parental Resilience (PR)
  - Social Connections (SC)
  - Concrete Support in Times of Need (CS)
  - Social and Emotional Competence of Children (SE)

3
Administration and Scoring

Target Population

The PAPF is intended for parents and other primary caregivers of young children who range in age from birth through eight years. The PAPF is appropriate for administration to both adult and adolescent parents and caregivers who have at least a fifth-grade reading level.

PAPF Materials

The PAPF materials include:

- the survey instrument – English version
- the survey instrument – Spanish version
- the scoring sheet – English version
- the scoring sheet – Spanish version
- the *User's Guide and Technical Report* (hereafter referred to as the *User's Guide*, or more simply, the *Guide*).

The cover page of the instrument contains important instructions. The first page of the instrument contains the background information items; the protective factors items begin on page 2. The items are divided in sections defined by the protective factors subscales. This will facilitate scoring of the instrument and computation of subscale scores and the total Protective Factors Index (PFI).

The PAPF is designed to be hand-scored by service provider staff after completion by the parent or staff administrator. The PAPF Scoring Sheet contains an area for recording the total and average scores for each subscale and the PFI, as well as an area for graphing the average scores. Average scores, not total scores, should be used as the subscale and PFI scores, as is made evident by the graph's scale. The English and Spanish instruments and scoring sheets are provided in Appendix A.

Professional Requirements

No formal training in clinical psychology, counseling psychology, social work or related fields is required for the proper administration and scoring of the PAPF. However, administrators and scorers should carefully study the *User's Guide* before administering the instrument. Although the PAPF is designed as a self-administered, paper-and-pencil inventory, it may also be administered as an in-person structured interview. In the latter situation, it is recommended that the administrator practice administering the instrument to someone else prior to administering it in a "live" in-person interview. No additional training is necessary.

Administration

General

The PAPF is designed to be a paper-and-pencil, self-administered instrument; however, it may also be administered by agency and service provider staff if the respondent has trouble reading English. The administrator should be thoroughly familiar with the purpose of the instrument and with the administration and scoring instructions and procedures presented in this *User's Guide*.

Instructions for Parent Self-Administration

Provide a comfortable, non-threatening environment that is free from distractions, has

adequate illumination, and has a flat surface for writing.

A box labeled "**For Administrative Purposes Only**" is provided at the bottom of page 1 of the instrument to allow administrators to enter identifying or other administrative information. As a rule, parents should not be asked to provide information in the "administrative purposes only" box.

1. Give the parent a copy the PAPF instrument and a pencil or pen.
2. Ask the parent to follow along as you describe what she/he will be doing.
3. Read the cover page to the parent.
4. Emphasize that she/he is strongly encouraged to respond to **all** statements in order for you to be able to explain what the survey results mean. [NOTE: Answering fewer than eight parent statements in a subscale reduces its reliability and accuracy of interpretation of results.]
5. Ask if she/he has any questions.
6. Tell the parent to turn to page 1 and say, "Before you take the survey, please complete the background information page. You do not have to include your name.
7. When she/he completes the parent information say, "Turn to page 2 containing the parent statements."
8. Say, "Please follow along with me as I read the directions for completing the survey." Then read the directions verbatim from the PAPF instrument.
9. Add: "After each statement, you must choose a response. Is the statement:
   - NOT AT ALL LIKE you or what you believe — if so, fill in the first circle." [Point to the first circle.]
   - NOT MUCH LIKE you or what you believe — if so, fill in the second circle." [Point to the second circle.]
   - A LITTLE LIKE you or what you believe — if so, fill in the third circle [Point to the third circle.]
   - LIKE you or what you believe — if so, fill in the fourth circle." [Point to the fourth circle.]
   - VERY MUCH LIKE you or what you believe — if so, fill in the fifth circle." [Point to the fifth circle.]
10. Say again, "Remember, there are no right or wrong answers, only your opinions. And, I strongly encourage you to respond to all statements."
11. Ask if she/he has any questions.
12. When you receive the completed instrument from the respondent, quickly review it in the respondent's presence to determine if the parent has provided multiple responses to any statement or if any statements have not been answered.
    - If the parent provides multiple responses to a statement say, "I see that you have given ___ responses to # ___. You can only give one answer. Which one BEST describes you? Is it _____ or _____?" If the parent refuses to choose one, the response option with the **lowest** value should be used as the response. [The numeric values of the response options are provided in the next section, "Scoring."]
    - If only one statement in a subscale has not been answered say, "I see you did not respond to # ___. It's important to respond to all statements so I may be able to accurately explain to you what the survey results mean." If the parent chooses to not respond, DO NOT try to force her/him to respond.

- If more than one statement per subscale has been left blank, say, "I see you did not respond to several statements. It's important to respond to all statements so that I may be able to accurately explain to you what the survey results mean." If the parent chooses to not respond, DO NOT try to force her/him to respond.

13. NOTE: If the parent refuses to take the PAPF or chooses to stop before completing it, they may do so without penalty unless it is a requirement for enrollment or participation in the program or project that is using the PAPF.

Instructions for Interviewer Administration

Provide a comfortable, non-threatening, and private environment that is free from distractions for the administration.

A box labeled "**For Administrative Purposes Only**" is provided at the bottom of page 1 of the instrument to allow administrators to enter identifying or other administrative information. As a rule, parents should not be asked to provide information in the "administrative purposes only" box.

1. If the parent can read some English, give her/him a copy of the PAPF instrument and ask her/him to follow along as you describe what she/he will be doing. If the parent cannot read English, you do not need to give her/him a copy of the PAPF instrument.
2. Read the cover page to the parent.
3. Emphasize that she/he is strongly encouraged to respond to **all** statements in order for you to be able to explain what the survey results mean. [NOTE: Answering fewer than eight parent statements in a subscale reduces its reliability and accuracy of interpretation of results.]
4. Ask if she/he has any questions.
5. Turn to the participant information on page 1.
6. Fill in today's date.
7. Say, "Before you take the survey, I need some important background information from you."
8. Read the other 9 items. You may re-phrase them into questions. For example, "What city do you live in?"
9. Record the responses verbatim to questions 2 and 3.
10. Read the items and response options for the multiple choice items (items 4 – 10).
11. Record the parent's responses to questions 4-10 by filling in the appropriate circles.
12. When you complete the parent information, turn to page 2.
13. If the parent has a copy of the instrument say, "Turn to page 2 containing the parent statements."
14. Say, "Please listen carefully as I read the directions for completing the survey." Then read the directions verbatim from the PAPF instrument <u>except</u> for the last two sentences. Do not read these two sentences.
15. Add: "After each statement, you must choose a response. Please tell me if the statement is:

    - "NOT AT ALL LIKE you or what you believe"
    - "NOT MUCH LIKE you or what you believe"
    - "A LITTLE LIKE you or what you believe"
    - "LIKE you or what you believe"
    - "VERY MUCH LIKE you or what you believe"

16. Say, "Please tell me which of these responses best describes you during the last couple of months."
17. Say again, "Remember, there are no right or wrong answers, only your opinions. And, I strongly encourage you to respond to all statements.
18. Ask if she/he has any questions.
19. Afterwards, say, "OK. Let's begin."
20. Proceed through the survey instrument.
21. Repeat the response options for the first four questions and as often as necessary.
22. Read each item verbatim.
23. Record the parent's response to each item on the instrument by filling in the appropriate circle.
24. If the parent provides multiple responses to a statement say, "You can only give one answer. Which one BEST describes you? Is it _____ or _____?" If the parent refuses to choose one, record the response option with the **lowest** value. [The numeric values of the response options are provided in the next section, "Scoring."]
25. If the parent refuses to respond to an item say, "It's important to respond to all statements so I may be able to accurately explain to you what the survey results mean." If the parent chooses to not respond, DO NOT try to force her/him to respond.
26. NOTE: If the parent refuses to take the PAPF or chooses to stop before completing it, they may do so without penalty unless it is a requirement for enrollment or participation in the program or project that is using the PAPF.

Missing Data

In cases where the parent has not responded to every item, subscale scores and the PFI can still be calculated, but caution should be exercised in interpretation because of reduced reliability of subscales containing fewer that nine item responses. It is questionable whether a subscale score should be calculated if responses to fewer than eight items are provided.

Subscale Scores and PFI Computation

When several questions or items are used to measure a construct, the numerical value of the responses may be combined by summing or averaging the response values. A composite measure based on this type of sum or average is typically called a scale (or index, such as the Protective Factors Index, PFI). If groups of items are clustered together to form subscales which measure different components (or dimensions) of the overall construct, the scale is said to be multidimensional.

Summative scale and subscale scores are constructed as the sum or mean of the relevant items. Because the mean of individual item scores is perfectly correlated with the sum of the item scores, it makes no difference for most statistical analyses whether mean or summed scores are used. Summed scale and subscale scores are sometimes easier to work with, while interpretation of mean scores is far more intuitive.

For example, if you are told that a parent received a total score of 16 on the Parental Resilience (PR) subscale, would you know how to interpret it without the aid of a scoring table, even knowing that the response values ranged from 0 to 4, as shown below? However, if you are told that this same parent scored an average of 1.8 on the PR subscale, you know that, on average, the parent falls

between "This is not at all like me or what I believe" and "This is a little like me or what I believe" in response to the nine strengths-based Parental Resilience items.

In other words, an average score of 1.8 is readily understood to be "low" and may indicate that the parent is not coping very well with stressors impacting everyday life and/or stressors related to their child. Thus, the implications of a score of 1.8 are much easier to grasp than a score of 16 when you keep in mind the values of the response scale.

In addition, mean scores can allow respondents to skip an item (no more than one missing item per subscale is recommended for the PAPF) if the agency or service provider does not want to require respondents to answer all items. Although computing a mean requires one more step than computing a sum, it is easy for a hand-scorer to do with a calculator. Further, computing both subscale scores and the total Protective Factors Index (PFI) as means rather than sums makes possible comparability among the subscales and the PFI. For these reasons, subscale scores and the PFI should be computed as mean scores.

The subscale scores are computed as the averages of the following items:

PF Subscale	Items
Parental Resilience	11 - 19
Social Connections	20 - 28
Concrete Support in Times of Need	29 - 37
Social and Emotional Competence of Children	38 - 46

Demographic information is provided in items 1 – 10.

Scoring

A box labeled "**For Administrative Purposes Only**" is provided at the bottom of the left-hand panel of the *PAPF Scoring Sheet* to allow administrators to enter identifying or other administrative information. As a rule, parents should not be asked to provide information in the "administrative purposes only" box.

Scoring should begin after the respondent has completed the self-administered instrument or after administration by a staff member**.**

The total for each of the four subscales is computed by summing the numerical values of the responses for each subscale. The numerical values of the response options are:

0 = This is NOT AT ALL LIKE me or what I believe
1 = This is NOT MUCH LIKE me or what I believe
2 = This is A LITTLE LIKE me or what I believe
3 = This is LIKE me or what I believe
4 = This is VERY MUCH LIKE me or what I believe

Using a calculator, sum the numerical values of the responses for the Parental Resilience subscale (items 11 – 19) and record the total on the line for "Parental Resilience Total" on the *PAPF Scoring Sheet*.

Compute the Parental Resilience Subscale Score as the average (mean) of the response values. In other words, divide the Parental Resilience Total by the number of responses the parent provided (i.e., divide by 9 if the parent responded to all 9 items; divide by 8 if the parent responded to only 8 items). Record the score on the line for "Parental Resilience Average Score" on the score sheet.

Repeat this procedure for the Social Connections (items 22 – 28), Concrete Support in Times of Need (items 29 – 37), and Social and Emotional Competence of Children (items 38 – 46) subscales.

In order to compute the Protective Factors Index (PFI), first sum the totals for the four subscales and record in the line for the PFI Total. Then divide this total by the total number of responses the parent provided in the entire instrument (i.e., by 36 if the parent responded to **all** items, by 35 if the parent left out one item, by 34 if the parent left out 2 items, etc.).

The **average scores**, not the total scores, represent the subscale scores and the PFI. If a parent does not respond to one of more items, total scores of the subscales cannot be compared. Further, the PFI total is not directly comparable to the subscale totals, even if the parent responds to all items. Computing **average scores** as the subscale scores and PFI avoids this problem. Average scores are directly comparable across the subscales and the PFI.

You may find it useful to construct a Protective Factors Profile for the respondent. This can be done by graphing the subscale and PFI scores (average scores) in the area provided on the *PAPF Scoring Sheet*. For example, you could circle or make a larger dot on the small dot that indicates the average score for each subscale and the PFI. As a visual aid, you may wish to connect those dots. An example scored Scoring Sheet is provided in Appendix B.

The cut scores, that is, 2.00, 3.00, and 4.00, described below, are intended as absolutes (particularly the 4.00 cut). Therefore, scores should not be rounded to the nearest tenth or whole number. That is, 3.99 should not be rounded to 4.00. A score of 4.00 means that the parent responded "4" to **each** item. 4.00 is the maximum score and should be interpreted with great caution. The cut scores and their derivation are discussed in the next section of this *Guide*.

Parents with maximum subscale scores and/or PFI scores, or even scores in the upper half of the "High" range (3.50 – 3.99), may be providing socially desirable responses. It is very important that service providers and researchers use the results of the PAPF in conjunction with other quantitative and qualitative parent measures. Together, these measures are known as a body of evidence. *Any decision regarding the status of individuals should rely on multiple measures, the body of evidence, and not on any single measure.*

Cut Scores and Protective Factors Strengths Levels

The Protective Factors (PF) measures are best used as continuous scales. The raw score totals are averaged to form a continuous mean scale in order to aid interpretation. However, some may prefer cut scores to indicate the relative strengths of the protective factors.

A cut score is a point on a score scale in which scores at or above the point are in a different category than scores below the point (e.g., pass-fail; low-moderate-high). Cohen and Swerdlik (2002) define a cut score as a "reference point, usually numerical, derived as a result of judgment, used to divide a set of data into two or more classifications, with some action to be taken or some inference to be made on the basis of these classifications" (p.101).

In the prevention field, the task of defining when something is a problem is often a difficult and subjective one. How does one determine if and what level of risk is problematic? One method of identifying "problematic" is by comparing data to a national average or to the results from a "norming" sample which is selected to represent the population in general or a specific population of interest. However, this assumes that the national average or norming sample is truly representative of the

population of interest. If the norming sample is not representative of the population for which the instrument is intended or if a norming study could not be performed so that a normed comparison is not possible, other methods for establishing cut scores must be found. Another method of establishing cut scores is use of a criterion measure (or "gold standard"), a valid and reliable measure that is widely accepted in the field, with which to compare results from the new measure.

In cases where there is no norming sample and no criterion measure, cut scores are harder to establish and defend. One method is to base the cut scores on the inherent meaning of the scale. While this is frowned upon in educational measurement, it is sometimes the only viable method of providing an indicator of potential risk or strength in measures of behavior, beliefs, attitudes or perceptions. Such is the case with the PAPF[1]. However, we believe that the PAPF response scale does have inherent meaning and, when applied to the protective factors statements, can be used to provide measures of a parent's perceptions of her or his beliefs, feelings, and behaviors with regard to the Strengthening Families protective factors indicators.[2]

The cut scores for the protective factors subscales and the PFI (mean scores) define Low, Moderate, High, and Maximum levels. The cut scores are: 2.00, 3.00, and 4.00. Thus, the Protective Factors Strength Levels are defined as:

PF Strength Level	Score Range
Low	0.00 – 1.99
Moderate	2.00 – 2.99
High	3.00 – 3.99
Maximum	4.00

To reiterate the discussion, concerns, and cautions in the previous section, a score of 4.00 means that the parent responded "4" to **each** item. 4.00 is the maximum score and should be interpreted with great caution. Respondents with maximum subscale scores and/or PFI scores, or even in the upper half of the "High" range (3.50 – 3.99), may be providing socially desirable responses. It is especially important that service providers and researchers use the results of the PAPF in conjunction with other quantitative and qualitative parent measures. Any decision regarding the status of individuals should rely on multiple measures, a body of evidence, and not on any single measure.

[1] Funding for the development of the PAPF did not allow for the conduct of a national norming study and the volunteer-based field test sample was more highly educated and less ethnically and racially diverse than the adolescent and adult population of the U.S.

[2] We acknowledge the problems inherently associated with self-report inventories such as self-report bias, inaccurate and untruthful responses, social desirability responses, influence of the characteristics and context of the external environment, etc.

4
Interpreting and Using the PAPF

An Important Reminder

Test scores alone do not provide sufficient information to make fully informed decisions. Test scores should be regarded only as a point of reference because they "simply provide data about some characteristics thought to be important" (Epstein, 2004, p. 27). It is extremely important that service providers and researchers use the results of the PAPF in conjunction with other quantitative and qualitative parent measures. Any decision regarding the status of an individual parent should rely on a body of evidence—that is, multiple measures—and not on any single measure.

Protective Factors Index and Subscale Scores

The Protective Factors Index (PFI) is a total measure of a parent's self-reported presence of beliefs, feelings, and behaviors that are indicators of four of the Strengthening Families protective factors, specifically: (a) parental resilience, (b) social connections, (c) concrete support in times of need, and (d) social and emotional competence of children. Subscale scores for each of these protective factors can be derived as well.

Statistical analyses indicate that the PFI and four subscales are valid and highly reliable measures of parents' perceptions of beliefs, feelings, and behaviors with regard to the indicators of the four Strengthening Families protective factors in the PAPF (see Chapter 5).

A PFI or subscale score in the low or moderate range should NOT be regarded as the absence of one or more of the protective factors. Rather, a PFI or subscale score in the low or moderate range should be viewed by those working with the parent as an opportunity to provide experiences that will help the parent to build or reinforce one or more of the four protective factors. Conversely, a PFI or subscale score in the high range should also be viewed as an opportunity; that is, as an opportunity to inquire about and discuss with the parent the specific, concrete ways in which one or more of the protective factors is manifest in their family, and to identify other personal and family strengths.

Irrespective of whether low, moderate, or high PFI or subscale scores are derived, the Parents' Assessment of Protective Factors inventory yields valid and reliable results that can be used to prompt specific shared conversations and decision-making with a parent about building or reinforcing their protective factors. Protective factors should be used to mobilize resources to meet the parent's, their child's, and their family's needs, and to provide a family environment that promotes optimal child development and reduces the likelihood of negative child and family outcomes.

5
Reliability and Validity

The two most fundamental characteristics of any measurement instrument are its reliability and validity.

Reliability

The Parents' Assessment of Protective Factors (PAPF) is a reliable measure of the four protective factors, parental resilience, social connections, concrete support in times of need, and social and emotional competence of children. Reliability refers to the consistency and replicability of measurements across time (Kiplinger, 2008).

Cronbach's coefficient alpha is the most widely used estimator of the reliability of tests and scales; however, it has been criticized as being a lower bound (hence, underestimating true reliability). A popular alternative to coefficient alpha is composite reliability (Petersen & Kim, 2013). The reliability of the PF subscales is estimated using three measures:

- Cronbach's coefficient alpha (α), a measure of internal consistency
- Composite reliability (CR) which measures the overall reliability of a collection of heterogeneous but similar items, that is, the reliability of the construct, or latent variable
- Average variance extracted (AVE) which is the variance in the indicators explained by the common factor, in other words, the amount of variance captured by a construct in relation to the variance due to random measurement error (Bacon, et al, 1995; Fornell & Larcker, 1981).

AVE and its relationship to CR are also criteria for establishing convergent validity, discussed in the next section. Using the CR and AVE values in conjunction is based on the two-step procedure recommended in Anderson and Gerbing (1988).

Nunnally (1978) and Nunnally and Bernstein (1994) recommend 0.70 as the minimum threshold for Cronbach's α. The suggested thresholds for α and composite reliability and AVE (Hair, et. al., 2010) are:

- α > 0.70
- CR > 0.70
- AVE > 0.50
- CR > AVE

The reliability coefficients and AVE for each of the subscales, shown in Table 1, were derived using the data provided by the first and second field tests described in Chapter 7.

Table 1. Reliability Statistics for the Protective Factors Subscales

Subscale	α	CR	AVE	CR > AVE?
Parental Resilience	.88	.95	.67	Yes
Social Connections	.93	.94	.64	Yes
Concrete Support in Times of Need	.87	.90	.51	Yes
Social & Emotional Competence of Children	.88	.94	.64	Yes

The Protective Factors Subscales appear to be highly reliable, with all internal consistency (α) coefficients greater than 0.85. The α for

the entire PFI is 0.95. The composite reliability of each subscale is greater than 0.90, much higher than the minimal threshold of 0.70. The Social Connections subscale shows the strongest internal consistency (α = 0.93), while the parental Resilience subscale demonstrates the highest overall reliability (CR = 0.95).

The recommended lower threshold for average variance extracted (AVE) is 0.50, which indicates that the variables adequately "explain" the variance in the construct. An AVE of less than 0.50 indicates that, on average, there is more error remaining in the items than there is variance explained by the latent factor structure imposed on the measure. Table 1 indicates that slightly more than half of the variance in Concrete Support in Times of Need is explained by the construct indicators (items), while approximately two-thirds of the variance in the other three constructs is explained by their indicators.

The last criterion suggested by Hair and colleagues (2010) for assessing reliability, that the composite reliability should exceed the average variance extracted (CR > AVE), is met by all four subscales. The CR values range from 0.90 to 0.95, while the AVE values range from 0.51 to 0.67.

Thus, the four subscales and the Protective Factors Index are highly reliable measures of parents' perceptions of their beliefs, feelings, and behaviors with regard to the Strengthening Families protective factors indicators.

Validity

Measurement validity is assessed as the extent to which the instrument measures what it purports to measure *and* the extent to which inferences, conclusions, and decisions made on the basis of the measurements are appropriate and meaningful. Validity of the PAPF instrument and the items comprising it was established in several ways.

Face and Content Validity

Face and content validity focus on how well the instrumentation (i.e., items) reflects the constructs it is supposed to measure. Face validity is the simplest form and refers to whether the instrument, "on the face of it," seems to measure the construct(s). A measure has face value if it obviously relates more to the meaning of the construct being measured than to other constructs. Content validity reflects the extent to which the measure covers the important aspects of the content domain. To establish face and content validity, instrument designers may first review the literature and existing instruments to identify aspects or dimensions of the construct to be measured and then select or write original items that, "on the face of it," appear to accurately and fully measure the constructs of interest. Face and content validity cannot be verified empirically; however, experts are usually employed to review the potential items (i.e., the item pool) for face and content validity (Engel & Schutt, 2009).

Items in the initial item pool for the PAPF were reviewed and revised by a Technical Advisory Committee and others, who concluded the item pool possessed sufficient face and content validity for development of the PAPF. The item selection and instrument development processes are described in detail in Chapter 6.

Construct, Convergent and Discriminant Validity

These measures of validity focus on how well the instrument measures the theoretical constructs that it is intended to measure. One approach to establishing construct validity is by assessing convergent and discriminant validity. The PAPF is a multi-dimensional

scale comprised of four subscales, each measuring a different dimension of the protective factors. Convergent validity is the degree to which the items within a subscale measure the same uni-dimensional construct, while discriminant validity is the degree to which the items in different subscales measure different constructs (Raubenheimer, 2004). In other words, convergent validity means that the items measuring a construct are highly correlated with each other, whereas discriminant validity means that items intended to measure one construct do not correlate too highly with items measuring other constructs. Thus, discriminant validity is the extent to which a construct is truly distinct from other constructs.

Convergent validity of a subscale is assessed by comparing the values of the composite reliabilities (CR) to the average variance extracted (AVE) of the latent construct. Thus, convergent validity actually assesses construct reliabililty. The CR should be larger than the AVE and AVE should be greater than 0.50, while CR should be greater than 0.70 (Hair, et. al., 2010).

As shown in Table 1 in the Reliability section, each of the four subscales meets these three criteria, thus establishing strong convergent validity of the subscales. The CR value for each of the subscales exceeds 0.90, while the AVE values range from 0.51 for Concrete Support in Times of Need to 0.67 for parental Resilience. In each case, CR exceeds AVE.

Discriminant validity of a subscale is assessed by comparing maximum shared variance (MSV), average shared variance (ASV)[3] and average variance extracted (AVE). The Hair et. al. (2010) thresholds for determining discriminant validity are:

- MSV < AVE
- ASV < AVE

MSV, AVE and ASV for the four subscales based on the field test samples are provided in Table 2.

Table 2. Discriminant Validity Statistics for the Protective Factors Subscales

Subscale	MSV	ASV	AVE	MSV < AVE?	ASV < AVE?
Parental Resilience	.77	.62	.67	No	Yes
Social Connections	.52	.45	.64	Yes	Yes
Concrete Support in Times of Need	.67	.58	.51	No	No
Social & Emotional Competence of Children	.77	.57	.64	No	Yes

Evidence for discriminant validity is mixed. However, this is to be expected. The theoretical constructs defining the protective factors, parental resilience, social connections, concrete support in times of need and social and emotional competence of children, are interrelated; therefore, the subscales are correlated. The discriminant validity patterns also are consistent with the hypothesized relationships. Factor inter-correlations are often considered the norm in social science research (Costello & Osborne, 2005). Development of the instrument took this reality into account and is described in more detail in Chapters 6 and 7.

The Parental Resilience (PR), Social and Emotional Competence of Children (SE) and Concrete Support in Times of Need (CS) subscales are highly inter-correlated, while the Social Connections (SC) subscale appears well-defined, with moderate correlation with the other subscales. Table 3 provides the

[3] Shared variance is the amount of variance that a construct is able to explain in another construct.

bivariate correlation coefficients and the square root of the average variance extracted (AVE) for the subscales. Taking the square root of the AVE makes it directly comparable to the correlation coefficient. The AVE indicates the amount of variance in the items that the latent construct is able to explain, while the bivariate correlation coefficient indicates the strength and direction of the relationship between two constructs. In Table 3, the square root of the AVE is provided on the diagonal while the off-diagonal elements are the bivariate correlation coefficients. All correlations are significant.

Table 3. Inter-correlations[a] of the Protective Factors Subscales

	PR	SC	SE	CS
PR	**.82**			
SC	.65	**.80**		
SE	.88	.63	**.80**	
CS	.82	.72	.73	**.72**

[a] The square roots of the AVE values are provided on the diagonal.

As Farrell and others (Farrell, 2010; Hurley, et al., 1997) point out, exploratory factor analysis (EFA) is particularly useful in identifying cross-loadings. EFA was used to identify cross-loadings; results are consistent with the hypothesized relationships discussed above. None of the Social Connections items cross-loaded, while four of the nine items on the Social and Emotional Competence of Children factor cross-loaded on the Parental Resilience factor. Two of the items on the Concrete Support in Times of Need factor also cross-loaded on the Parental Resilience factor. This issue is discussed in more detail in Chapters 6 and 7.

6
Development of the PAPF
Phase 1: Inventory Development

Background

Development of the Parents' Assessment of Protective Factors instrument proceeded in several stages subsumed under Phases 1 and 2. Prior to the item development process, an earlier version of the instrument, then called the Caregivers' Assessment of Protective Factors (CAPF), was developed and administered to individuals enrolled in four intervention programs across the country that were funded by the Center for the Study of Social Policy's Quality Improvement Center on Early Childhood (QIC-EC) from 2008 to 2013. The overall research question guiding these interventions was:

> *How and to what extent do collaborative interventions that increase protective factors and decrease risk factors in core areas of the social ecology result in optimal child development, increased family strengths, and decreased likelihood of child maltreatment, within families of young children at high-risk for child maltreatment?*

Caregiver participants in the four programs were administered six common instruments, including the first version of the CAPF, at entry into the programs and at the conclusion of the interventions in order to assess change and help evaluate the effectiveness of the programs. Because the CAPF was a new instrument developed for the QIC-EC projects, exploratory factor analyses (EFA) were conducted to determine the underlying structure (latent dimensions) of the data and the degree of similarity to the pre-defined (i.e., *a priori*) constructs. Following the factor analyses, reliability analyses were conducted to assess the reliability of the scales measuring the constructs defined *a priori* and the scales indicated by the exploratory factor analyses. The factor and reliability analyses strongly suggested a different factor structure for the indicators measured by the initial CAPF instrument than that implied by the *a priori* constructs. These analyses also indicated that several items should be deleted from their subscales. Item analyses indicated a serious ceiling effect for almost all items in the instrument. The original instrument consisted of a series of statements which respondents rated on a scale of 1 to 5, where 1 indicated "Hardly Ever" and 5 indicated "Almost Always." Response options 2 through 4 were not defined. The items were predominately stated in the positive, with a few items stated negatively, requiring reverse-coding for analysis.

Although cognizant of the issues discussed above, version one of the CAPF was still deemed a better measure of the Strengthening Families protective factors than existing instruments such as the Parental Stress Index (PSI) and the Adult-Adolescent Parenting Index 2 (AAPI-2). Therefore, the Center for the Study of Social Policy made the decision to revise and refine the existing CAPF instrument by retaining some items, revising others, and writing new ones to form an item pool that would be pilot tested in Phase 1 of the instrument development process. A new instrument, renamed the "Parents' Assessment of Protective Factors" (PAPF), was

constructed based on results of pilot and field tests conducted during Phases 1 and 2.

The instrument development process is divided into two distinct phases. Phase 1 included development of the item pool, cognitive testing of the item pool, and pilot testing of the items that were used to construct the instruments in Phase 2.

In Phase 2, two field test instruments were constructed. The first instrument was based on the results of the item analyses of the item pool that was piloted-tested in Phase 1. The second field test instrument was constructed based on results of the item analyses and exploratory factor analyses (EFA) of the data provided by the first field test. The final PAPF instrument was constructed based on the results of item analyses, reliability and validity analyses, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA) of data collected in the two field tests. The item and instrument development processes in Phases 1 and 2 are described below and in Chapter 7, respectively.

This chapter documents the steps taken in Phase 1 in designing and pilot-testing items to measure parents' and caregivers' beliefs, perceptions, feelings and behaviors related to child protective factors. One hundred thirty-six (136) items were developed for the item pool and 119 were pilot tested online using Amazon's Mechanical Turk (MTurk). The item development process involved several steps, including review of existing measures; input from a Technical Advisory Committee, other experts in the field, and a survey designer; cognitive testing with parents and caregivers of young children; pilot testing with 594 parents/caregivers; and psychometric analyses.

Development of the Item Pool

Development of the items for pilot testing involved several steps, including review of the literature, review of existing measures, review of items by the TAC, and cognitive testing of the item pool with parents of young children.

Item selection began with review of the original CAPF instrument. Items were retained, revised, or omitted based on results of the exploratory factor analyses and reliability analyses performed in the QIC-EC project and described above. Existing measures, such as the Parenting Scale, Parenting Sense of Competence Scale, Perceived Stress Scale, Parent-Child Relationship Inventory, Multidimensional Scale of Perceived Social Support, and the Parenting Skills Assessment, were also reviewed. All in all, 30 instruments were reviewed. These instruments are listed in Appendix C.

Technical Advisory Committee Review

An item pool consisting of 136 items was reviewed by the Quality Improvement Center for Early Childhood (QIC-EC) Leadership Team, revised, and then sent to the Technical Advisory Committee (TAC) for review and recommendations. The TAC, members of the QIC-EC Leadership Team, and others met in Washington, DC to review the potential items in the item pool and to make recommendations regarding face and content validity, bias, age appropriateness, retention or deletion of individual items, and revision of individual items. This group also made recommendations for type of response scale (i.e., Likert vs. Osgood's Semantic Differential scale, number of response options, and response labels). Members of the TAC, QIC-EC Leadership Team, and others who reviewed the item pool are listed in Appendix D.

Cognitive Testing

Prior to pilot testing of the item pool, cognitive testing was conducted. The primary purpose of cognitive testing is to evaluate how well each survey item performs when administered to respondents similar to the target population. The cognitive interviews identified items that were unclear or difficult to understand, hard to answer, or culturally biased. This process also identified terminology that was unclear to respondents (parents and caregivers of young children); assessed whether parents/caregivers interpreted the items as intended; and determined whether they had any difficult choosing one of the response options. The cognitive interviews collected information on items that the parents/caregivers believed should be deleted or modified and how the items should be modified. The interviewers' script for the cognitive interviews, Instructions for Cognitive Testing of the Caregivers' Assessment of Protective Factors, and the handout, List of Questions for Focus Groups, are provided in Appendix E.

Please note that at the time of the pilot and field tests, the instrument was still called the Caregivers' Assessment of Protective Factors (CAPF). It was subsequently renamed the Parents' Assessment of Protective Factors (PAPF). Therefore, the discussion of the pilot and field tests refers to the CAPF while the final instrument is referred to as the PAPF.

Cognitive testing of the item pool took place on May 18, 2013 at a meeting of the Community Café Leadership Team in Olympia, Washington, which met at a family resource center, and on May 23, 2013 at a child development center in Atlanta, Georgia. Participants in both groups received a stipend of $50. The focus group participants at both sites are described in Table 4.

Table 4. Characteristics of the Focus Groups Participating in Cognitive Testing for the CAPF

Characteristics	Atlanta		Olympia		Total	
	n	%	n	%	n	%
Child resides with Participant	9	100	5	56	14	78
Participant is primary caregiver	9	100	3	60	15	79
Participant's gender						
Female	8	89	9	90	17	90
Male	1	11	1	10	2	10
Race/ethnicity						
Asian	0	0	1	10	1	5
Black	8	89	0	0	8	42
Hispanic	0	0	7	70	7	37
White non-Hispanic	1	11	2	20	3	16
Multi-racial	0	0	0	0	0	0
Other	0	0	0	0	0	0
English is main language	9	100	5	56	14	78
Education completed						
Elementary school	0	0	0	0	0	0
Middle school	0	0	1	11	1	6
High school or GED	4	44	2	22	6	33
Trade/tech. school	3	33	1	11	4	22
2-yr college	2	22	2	22	4	22
4-yr. college	0	0	3	33	3	17
Post-graduate	0	0	0	0	0	0

	Atlanta	Olympia	Total
Participants' median age	25	41	34

The cognitive testing took approximately two hours. A total of 19 parents participated, nine from Atlanta and ten from Olympia.

The participants provided valuable information on the effectiveness of the items in the item pool. Their recommendations were primarily deletion of some items or modifications to the wording of other items.

The result of the three rounds of reviews (QIC-EC Leadership Team, TAC, and cognitive testing) was a revised item pool of 119 items. These items were pilot tested as described below.

Pilot Testing of the Item Pool

Upon completion of the cognitive testing, 119 items were administered online to self-reported parents of young children in the U.S. using Amazon's Mechanical Turk (MTurk) during June and July 2013.

Amazon's Mechanical Turk (MTurk)

MTurk makes use of an on-line labor market where researchers (called Requesters) post jobs such as responding to surveys, extracting information from images, etc., and respondents (Workers) log on and choose which jobs to do for pay (usually less than a dollar). This is an example of "crowd-sourcing", which is the process of using the power of many individuals (the crowd) and the internet to accomplish specific tasks. Azzan (2013) and Azzan and Jacobson (2013) and others (cf. Berinsky, et al., 2013; Buhrmester, et al., 2011; Mason & Suri, 2012), have evaluated the capabilities of MTurk in a variety of applications. Azzam supports the use of MTurk for establishing the validity and reliability of survey instruments before administering them to the intended participants: "By posting a survey on MTurk and collecting responses from individuals with similar background characteristics as your intended participants, an evaluator can establish the reliability of a measure, get feedback on the items…. All this can be accomplished in a matter of days." (Azzam, 2013).

Pilot Test Design

Because of the large number of items in the item pool, 119, we could not administer all items to the same people. Therefore, the items were divided into three "surveylets" which were posted as separate survey instruments on MTurk. Each surveylet contained the items measuring two protective factors constructs. The three surveylets were:

- Surveylet 1: Parental Resilience, which was conceived as measuring two components, Parenting Resilience (17 items) and General Life Resilience (13 items), 30 items total.
- Surveylet 2: Social Connections (26 items) and Concrete Support in Times of Need (18 items), 44 items total.
- Surveylet 3: Social and Emotional Competence of Children (26 items) and Knowledge of Parenting and Child Development (19 items), 45 items total.

In addition to the pilot test items, each survey contained 2 "validity" items intended to gauge whether workers are paying attention and taking the survey seriously. About half-way through each surveylet and a few items before the end an item was included to check whether workers were actually reading the questions. The two items directed the respondents to "Please click Agree for this question" and "Please click Disagree for this question." Only a few did not respond correctly to these items. These participants' data were discarded.

The surveylets were posted on MTurk from June 26 to July 23, 2013. Initial response was rather low, so the compensation was increased from 10 cents to 15 cents, which did increase response. Compensation was eventually increased to 25 cents, which increased response substantially.

MTurk Respondents

Response to the MTurk instruments was not as high as was hoped, probably because of the low compensation rates and the lengths of the surveys. Surveylet 1 yielded 176 valid cases; out of 218 initial respondents, 24 were not primary caregivers of children five years of age or younger, six answered only a few questions and 4 did not respond correctly to the validity questions or gave the same response across the board. Surveylet 2 yielded 175 usable cases; out 213 respondents 22 were

not primary caregivers of children aged 5 or under and 16 answered only a few items. Surveylet 3 was the most popular. Out of the 308 who initially responded, only 243 said they were primary caregivers of a child under six years of age.

Characteristics of the MTurk respondents with valid data were slightly skewed when compared to the general U.S. population. The respondents to Surveylets 1 and 2 were disproportionately female, while respondents to all three surveylets were disproportionately non-minority, native-born, English-speakers, and highly educated. The distributions of the pilot test samples are provided in Appendix F.

Subscales

The CAPF was designed to measure the five protective factor constructs, one of which, parental resilience, was conceived of as encompassing two distinct components, parenting resilience and general life resilience. The other four protective factors were social connections, concrete support in times of need, social and emotional competence of children, and knowledge of parenting and child development. Responses to items in each of these constructs were averaged[4] to compute subscale scores. Subscale scores presented in Table 5 were computed based on the original, *a priori* subscale specifications (prior to the exploratory factor analyses and reliability analyses, which were used to refine the subscales). Table 5 indicates that the majority of responses to most of the positively worded items was "Agree" or "Strongly Agree"; the majority of responses to the negatively worded items was "Disagree" or "Strongly Disagree." It is unknown whether this response pattern reflected accurate reporting, reporting of socially desirable responses, or a ceiling effect. Because this pattern was less pronounced than in the original CAPF administrations (most likely due to increasing the number of response options from five to six and labeling each option rather than the two endpoints only) and the pattern varied by construct, it seems probable that the patterns observed in the revised CAPF item pool were due to a combination of accurate and socially desirable reporting. The subscale means are shown in Table 5.

Table 5. Subscale Means of the CAPF Item Pool from the Pilot Test

Subscale	Mean[1]	Standard Error	Standard Deviation
Parental Resilience: General Life Resilience	4.82	0.05	0.71
Parental Resilience: Parenting Resilience	4.99	0.05	0.66
Social Connections	4.77	0.07	0.91
Concrete Support in Times of Need	4.43	0.06	0.73
Social & Emotional Competence of Children	5.27	0.04	0.58
Knowledge of Parenting & Child Development	4.89	.03	0.56

[1]Response options and values are: 1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Somewhat Agree; 5 = Agree; 6 = Strongly Agree.

Review of the items in each of the subscales revealed that the more socially desirable items were found in the two Parental Resilience subscales, as well as in the Social and Emotional Competence of Children and Knowledge of Parenting and Child Development subscales. Many of the items in the Social Connections and Concrete Support in Times of Need seemed to be more neutral with respect to positive or negative connotations.

[4] Some participants failed to respond to one of more items in each subscale. Imputation of missing values was not deemed advisable because the CAPF was a new instrument and lacked the research basis for making imputation decisions. In order to minimize loss of cases while preserving the intent of the measures, responses were *averaged* across subscale items for respondents who gave valid answers to *at least 75 percent* of the items on the subscale. Participants who responded to less than 75 percent of the items did not receive subscale scores.

Item Analyses

Due to the small number of usable cases for each survelyet (176, 175, and 243), classical test theory procedures, rather than item response theory, were used to examine the item characteristics of the item pool. Exploratory factor analyses, reliability analyses, and differential item functioning (gender and ethnic bias) were used to analyze the item pool and generate recommendations for construction of an instrument for field testing.

Exploratory Factor Analyses

Exploratory factor analyses (EFA) using the Statistical Package for the Social Sciences, version 21 (SPSS 21) were conducted in order to determine the factor structure of the CAPF items. An EFA was conducted for each surveylet. Principal axis factoring with oblique (promax) rotation was used. Two types of factor extraction, principal components analysis and principal axis factoring, and two types of factor rotation, orthogonal (which produces uncorrelated factors) and oblique (which allows correlated factors), were investigated in the QIC-EC interventions evaluation prior to the pilot test study. It was determined that principal axis factoring (PAF) with oblique (promax) rotation produces the "cleanest" factor structure. That is, PAF with promax rotation resulted in the fewest factor loadings below 0.30, the fewest number of item cross-loadings, and no factors with fewer than three items; therefore, this type of factor solution demonstrated the best fit to the CAPF data. Because not all participants responded to every item, pairwise deletion of missing data was used to maximize the amount of data for analysis.

Reliability Analyses

Reliability analyses (RA) were conducted to test the reliability of the subscales measuring the constructs defined *a priori* and the subscales extracted by the EFA. The reliability of each set of items defining the subscales was tested using Cronbach's alpha[5]. Cronbach's alpha (α) is a measure of the internal consistency of a subscale. Low item-total scale correlations combined with increases in Cronbach's α if the item is deleted indicate which items should be considered for deletion in development of the new inventory.

Differential Item Functioning and Item Bias

One concern in survey instruments and academic tests is bias, or differential item functioning (DIF). The examination of test items for bias or fairness to individuals is an important aspect of the validation and evaluation of any survey instrument or educational assessment. Item bias is said to occur when some items in a test (or survey instrument) are found to function differently for a specific subgroup of the general group being tested (or surveyed), making direct comparison of their performance on the items inappropriate (Plake & Hoover, 1979).

The term *differential item functioning* (DIF) is more often used in recent research studies instead of *item bias*. DIF is a more accurate

[5] Cronbach's alpha (α) is a measure of internal consistency, that is, how closely related a set of items are as a group. A "high" value of α is often used (along with substantive arguments and possibly other statistical measures) as evidence that the item measures an underlying (or latent) construct. Technically speaking, Cronbach's α is not a statistical test—it is a coefficient of reliability (or internal consistency). Cronbach's α is a function of the number of test items and the average inter-correlation among the items. The formula for the standardized Cronbach's alpha is:

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

where N is equal to the number of items, c-bar is the average inter-item covariance among the items, and v-bar equals the average variance.

and less judgmental term than item bias and refers to any empirical method used to flag items for possible item bias (Shealy & Stout, 1993). In the pilot study DIF was examined with regard to gender and race/ethnicity. Due to the small number of cases, it was not appropriate to use item response theory (IRT) to evaluate DIF. Therefore, descriptive and non-parametric statistics were used to examine items for DIF.

Results

Results of the exploratory factor analyses (EFA) indicated a slightly different factor structure than originally hypothesized (via *a priori* constructs). Both the EFA and reliability analyses identified items that should be omitted from the subscales. Appendix G provides item statistics, group differences and local dependence estimates for the pilot test items. These statistics are provided separately for the six constructs in Tables G-1 – G-6 of Appendix G. The tables list each item; its factor loading; Index of Discrimination (ID); reliability coefficient of the subscale if the item is deleted; indications of significant gender or race/ethnic differences in the item; and items that are highly correlated with that item. The information provided in these tables was used to select items for the first field test in Phase 2.

7
Development of the PAPF
Phase 2: Instrument Development

This section documents the steps taken in Phase 2 to develop and field test a new strengths-based instrument designed to measure parents' self-reported beliefs, feelings and behaviors that are regarded as indicators of the Strengthening Families protective factors. Two field tests were conducted.

The first field test instrument was based on the results of the item analyses of the item pool that was piloted-tested in Phase 1. The second field test instrument was constructed based on results of the item analyses, exploratory factor analyses, and reliability analyses from the first field test data. The final PAPF instrument was constructed based on the results of item analyses, reliability and validity analyses, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) of data collected in the two field tests.

At the time of the two field tests the instrument was still called the Caregivers' Assessment of Protective Factors (CAPF) and, thus, will be referred to by that name in this section.

Field Test 1

The first field test of the initial CAPF instrument was conducted from December 5, 2013 through January 5, 2014. The purpose of the first field test was to test the efficacy of the items, response format, and administration format. This instrument was administered online and consisted of a total of 78 items presented as statements with Likert-type response options.

Item Selection and Instrument Design

The information provided by the pilot test (described in Appendix G) was used to select items that appeared most related to the latent constructs of interest and that discriminated best between respondents who scored high or low on the pilot test measures.

Thirteen items in each of the six constructs[6] were selected for the first field test, three more per construct than was anticipated for the second field test instrument. The additional items were included to allow identification of the 10 items that best explained each construct; these items would be administered in the second field test. Nine demographic items were also included in the field test instrument.

Item format and response options were also re-evaluated. Continuing review of the literature indicated the desirability of moving from a deficit model to a strength-based model for instrument design. Consequently, items that were negatively worded were transformed to positive statements. For example, "I feel negative about being a parent" was changed to "I feel positive about being a parent" and "I lose my patience when my child won't stop crying" was changed to "I stay patient when my child won't stop crying."

[6] The reader is reminded that at the time of the first field test, the construct, parental resilience, was conceived of as encompassing two components: parenting resilience and general life resilience. The first field test instrument contained 13 items for each component.

The response options were also revised for the first field test to better capture the intent of the items. The response options of, "Strongly Disagree," "Disagree," "Somewhat Disagree," "Somewhat Agree," "Agree," and "Strongly Agree" were changed to:

- This is NOT AT ALL LIKE me or what I believe
- This is NOT MUCH LIKE me or what I believe
- This is A LITTLE LIKE me or what I believe
- This is LIKE me or what I believe
- This is VERY MUCH LIKE me or what I believe.

Administration

The first field test of the initial CAPF instrument was administered online using SurveyMonkey, a Web-based survey development and administration site. SurveyMonkey is a tool that allows users to create their own surveys using question format templates and administer them online. Surveys are accessed through a study-specific Web link.

Parents and other caregivers of children under nine years of age were recruited through the National Strengthening Families Network, networks of multiple staff of the Center for the Study of Social Policy, and social media. The recruitment letter is provided in Appendix H.

Respondents

A total of 1,025 parents and other caregivers completed the entire survey instrument and were included in the analyses; therefore, there were no missing data. Characteristics of the volunteer respondents were slightly skewed when compared to the general U.S. population. When compared to the general U.S. population, respondents were overwhelmingly female; disproportionately white non-Hispanic and native English speakers; highly educated; and more likely to live in the Midwest region of the country. It is likely that the reason for the dramatically different demographic patterns is that the request for assistance in recruiting parent volunteers for the field test was sent to leaders of child service agencies and service providers, who themselves, or their staffs, responded to the online instrument.

Table 6. Demographic Characteristics of Field Test 1 Respondents

Characteristics	Field Test 1 Respondents %	US Population[1] %
Gender		
Female	6	51
Male	94	49
Minority status		
White non-Hispanic	71	63
Minority	29	37
Region of the country		
Midwest	29	18
Northeast	10	18
South	38	37
West	23	23
English is main language		
Yes	97	80[2]
No	3	20
Education completed		
No formal schooling	<1	<1
Elementary school	0	2
Middle school/junior high	1	11
High school or GED	11	50
Trade or technical school	3	4
2-yr. college with AA degree	11	5
4-yr. college with BA/BS degree	34	18
Post graduate degree	40	10

[1]Source: 2010 United States Census
[2]English is the language spoken at home.

Psychometric Analyses

Classical test theory procedures were used to examine the item characteristics. Exploratory factor analysis and reliability analyses were

used to analyze the items and generate recommendations for construction of the CAPF instrument that would be administered in the second field test.

Exploratory Factor Analysis

Exploratory factor analyses using the Statistical Package for the Social Sciences, version 21 (SPSS 21) were conducted in order to determine the factor structure of the CAPF items. Exploratory factor analysis (EFA) was deemed more appropriate than confirmatory factor analysis (CFA) because the inventory is a new instrument even though it was developed to measure underlying theoretical concepts. EFA is considered more appropriate for scale development while CFA is preferred for verifying the factor structure of a set of observed variables (e.g., survey items) and testing the hypothesized relationship between the observed variables and their underlying latent constructs (Kelloway, 1995; Gurging & Hamilton, 1996; Hurley, et al., 1997; Preedy & Watson, 2009). The objective of CFA is to statistically test whether the data fit a hypothesized measurement model which is based on theory and/or previous analytic research. CFA is used to cross-validate the factor structure obtained by the EFA in the next stage of this project, Field Test 2.

The factorability of the field test items was evaluated using the Kaiser-Meyer-Olkin (KMO)[7] measure of sampling adequacy and Bartlett's test of sphericity[8]. The KMO measure of sampling adequacy was .97, well above the recommended minimum value of .60 (Beavers, et. al., 2013), and Bartlett's test of sphericity was significant (χ^2 = 52757.85, df = 3003, $p < .001$).

Exploratory factor analysis of the 1,025 responses to 78 items was conducted. Principal axis factoring with oblique (promax) rotation (kappa = 4) was used to determine the factor structure of the survey items. The factor solution converged in 16 iterations. The scree test suggested a factor structure of five factors. Two additional EFAs were run in which the number of factors to be extracted were specified, first six- then five-factor solutions as suggested by Costello and Osborne (2005). The five-factor solution produced the "cleanest" factor structure[9]. The five-factor solution also was most congruent with the hypothesized theoretical structure of the five protective factors constructs.

Reliability Analyses

Reliability analyses were conducted to test the reliability of the subscales measuring the constructs defined *a priori* and the subscales extracted by the EFA. The reliability of each set of items defining the subscales was tested using Cronbach's alpha (α). Low item-total scale correlations combined with increases in α if the item is deleted indicate which items should be considered for deletion in the development of the CAPF inventory.

Results

Results of the five-factor EFA indicate a factor structure that is highly consistent with

[7] A high value of the Kaiser-Meyer-Olkin measure of sampling adequacy is a measure of the degree of common variance among the variables in the analysis. This statistic predicts whether data are likely to factor well, based on correlation and partial correlation. High values (i.e., close to 1.0) generally indicate that a factor analysis may be useful with the data.

[8] Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identify matrix (i.e., all variables are totally non-collinear), which would indicate that the variables are unrelated and, therefore, unsuitable for factor analysis.

[9] Factor loadings above .30, fewest number of item cross-loadings, and no factors with fewer than three items (Costello & Osborne, 2005, Beavers, et al., 2013).

the original theory-based *a priori* constructs. The factors are:

- Parental Resilience
- Social Connections
- Concrete Support in Times of Need
- Social and Emotional Competence of Children
- Knowledge of Parenting and Child Development

The results of the five-factor EFA of the 78 items included in the first field test of the CAPF instrument are provided in Table 7. The first column lists the items in the order of their factor loadings. The second column indicates the original construct for each item. The last five columns provide the factor loadings produced by the EFA. Thus, Table 7 describes the factor structure extracted by the five-factor EFA solution. The majority of the variance was explained by the first factor, 34 percent, and the five factors together explained 50 percent of the variance[10].

Table 7 represents the following constructs:

Factor 1: Social Connections (SC);
Factor 2: Parental Resilience (PR), which extracted the measures of General Life Resilience (PR:G) and Parenting Resilience (PR:P) in one factor;
Factor 3: Concrete Support in Times of Need (CS);
Factor 4: Knowledge of Parenting and Child Development (K); and
Factor 5: Social and Emotional Competence of Children (SE) (contains a few items from the original Parental Resilience: Managing Parenting Stress construct).

Items that did not load on any factor are highlighted in gray. Items with factor loadings less than 0.30 are not displayed. The reader will note that a few items cross-load on two different constructs. While cross-loadings are not uncommon, one of the goals in selecting the factor analysis procedure is to minimize the number of cross-loadings[11]. Indeed, factor inter-correlations (resulting in factor cross-loadings) are often considered the norm in social science (cf. Costello & Osborne, 2005). Cross-loadings were considered in selection of items for the final instrument. Schonrock-Adema and colleagues, (2009) recommend removal of an items if the cross-loading is greater than 0.40. Two items were found to have cross-loadings greater than .40 and were subsequently excluded from the second field test instrument. Tables 7 and 8 present the factor loadings and factor inter-correlations, respectively.

The results presented in Table 7 indicate that, in general, the EFA confirmed the efficacy of the original measurement model of the theoretical constructs.

- All items thought to measure the Social Connections protective factor loaded on the same factor and explained 34 percent of the variance.
- 12 of the 13 Parental Resilience: General Life Resilience and nine of the 13 Parental Resilience: Parenting Resilience items loaded on the same factor.
- 10 of the 13 Concrete Support in Times of Need items loaded on the same factor, two items did not load on any factor, and the remaining item cross-loaded on the Social Connections factor.

[10] This means that half of the variation in protective factors is accounted for by the items and latent constructs in the model.

[11] Prior research indicated that principal axis factoring with promax rotation produced the fewest number of cross-loadings. This was confirmed with the current data when a principal components analysis resulted in a greater number of cross-loadings and a greater number of factor loadings less than .30.

- 12 items thought to measure Knowledge of Parenting and Child Development loaded on the same factor and one item did not load on any factor.
- Items thought to measure the remaining construct, Social and Emotional Competence of Children, were much less coherent and spread across multiple factors. Only 5 of the 13 Social and Emotional Competence of Children items loaded on the same factor; one item did not load on any factor, and the remaining seven loaded on the Parental Resilience (3) and Knowledge of Parenting and Child Development (4) factors.

Table 8 confirms the lack of discriminant validity of the Social and Emotional Competence of Children factor, showing factor inter-correlations of .69, .57, and .54 with the Parental Resilience, Knowledge of Parenting and Child Development, and Social Connections factors, respectively.

Table 7. Factor Loadings Produced by the Exploratory Factor Analysis of the First Field Test Instrument

Item	Original Construct	Factor				
		1 (SC)	2 (PR)	3 (CS)	4 (K)	5 (SE)
28. I have someone who will encourage me when I need it.	SC	.893				
15. I have someone who will help me get through tough times.	SC	.851				
35. There are people in my life who encourage me.	SC	.849				
34. I have someone who helps me calm down when I get upset.	SC	.838				
61. If I need help getting what I need, I have someone who will help me.	SC	.833				
43. I have someone I can ask for help when I need it.	SC	.831				
29. I have someone who can help calm me down if I get frustrated with my child.	SC	.829				
47. I have someone who helps me feel good about myself.	SC	.805				
67. I have someone to talk to about important things.	SC	.791				
79. I have someone who will tell me in a caring way if I need to be a better parent/caregiver.	SC	.629				
48. I am willing to ask for help from my family.	SC	.625				
66. I have someone who will help me understand more about my child.	SC	.491		.302		
49. I am willing to ask for help from my friends.	CS	.456		.310		
62. I ask for help when I cannot take care of my daily responsibilities.	SC	.428				
82. I take care of my daily responsibilities even when I am sad.	PR:G		.875			
59. I take care of my daily responsibilities even if problems make me sad.	PR:G		.805			
60. I take care of my daily responsibilities even when I am angry.	PR:G		.786			
37. I take good care of my child even when I am sad.	PR:P		.703			
36. I pay attention to my child even when I am sad.	PR:P		.628			
72. I take good care of my child even when I have personal problems.	PR:P		.593			
81. I manage the daily responsibilities of being a parent/caregiver.	PR:P		.579			
83. I manage the stress of being a parent/caregiver.	PR:P		.571			

Item	Original Construct	Factor				
		1 (SC)	2 (PR)	3 (CS)	4 (K)	5 (SE)
86. I have a positive attitude about being a parent/caregiver.	PR:P		.536			.319
33. I have the strength within myself to solve problems that happen in my life.	PR:G		.530			
39. I am confident I can achieve my goals.	PR:G		.489	.366		
64. I believe that my life will get better even when bad things happen.	PR:G		.486			
65. I feel positive about being a parent/caregiver.	PR:P		.486			.311
26. I stand up for myself when I need to.	PR:G		.424	.356		
87. I like being a parent/caregiver.	SE		.412			.348
63. I find ways to handle problems related to my child.	PR:P		.412			
52. When a problem or crisis happens, I try to find a way to solve it.	PR:G		.401			
10. I have a positive attitude about my life.	PR:G		.401			
38. I have goals for myself.	PR:G		.396			
16. I am confident I can take good care of my child.	PR:P		.387			
27. I enjoy being a parent/caregiver even though I know it can be hard.	PR:P		.359			.338
11. I do things to make my life better.	PR:G		.346			
73. I encourage my child when he or she behaves well.	SE		.343		.311	
75. I can tell how my child is feeling.	SE		.330			
45. It is easy for me to give affection to my child.	K					
25. I make an effort to learn about the resources in my community that might be helpful for me.	CS			.710		
24. I make an effort to learn about the resources in my community that might be helpful for my child.	CS			.564		
19. I don't give up when I run into problems trying to get the services I need.	CS			.549		
54. I am willing to ask for help from community programs or agencies.	CS			.533		
56. I know where I can get helpful information about parenting and taking care of children.	K			.531	.417	
84. I try to get help for myself when I need it.	PR:G			.512		
40. When I cannot get help right away, I don't give up until I get the help I need.	CS		.411	.474		
46. I know where to go if my child needs help.	CS			.444	.301	
57. Asking for help for my child is easy for me to do.	CS			.443		

Item	Original Construct	Factor				
		1 (SC)	2 (PR)	3 (CS)	4 (K)	5 (SE)
77. If I had trouble taking care of my family's basic needs, such as getting food or housing, I would know where to go for help.	CS			.443		
18. I don't give up when I run into problems trying to get the services my child needs.	CS		.305	.440		
78. I know where to get help if I have trouble taking care of emergencies.	CS			.384		
30. Asking for help for my child is NOT embarrassing.	CS					
76. I talk to my child even if my child is too young to understand what I am saying.	SE				.692	
74. It is important for parents/caregivers to talk to children.	K				.640	
13. Parents/caregivers should talk to young children even if they are too young to understand.	K				.612	
69. The way parents/caregivers treat children when they are young will influence how children act as they get older.	K				.583	
55. I explain things to my child, even if my child is too young to understand what I am saying.	SE				.573	
53. Children should be encouraged to learn new things.	K				.539	
20. Holding infants a lot will NOT spoil them.	K				.506	
70. I know what children are able to do at different ages.	K			.347	.448	
21. Picking up infants when they cry will NOT spoil them.	K				.438	
12. I know where I can get helpful information about children's development at different ages.	K			.413	.427	
80. I know what toys are appropriate for children at different ages.	K			.328	.382	
85. I know what to do to help children develop well.	K			.322	.359	
51. I help my child learn to adjust to new things.	SE				.326	
22. I know what to do to help my child feel safe and secure.	SE				.323	
23. I make an effort to get whatever services my child needs.	CS					
58. Having regular routines with children is important.	K					
17. I maintain self-control when my child misbehaves.	PR:P					.845
50. I stay calm when my child misbehaves.	SE					.835

Item	Original Construct	Factor				
		1 (SC)	2 (PR)	3 (CS)	4 (K)	5 (SE)
42. I can control myself when I get angry with my child.	PS					.703
71. I stay patient when my child cries.	PS					.644
32. I help my child learn to manage frustration.	SE					.532
31. I am happy when I am with my child.	SE					.481
68. I help my child calm down when he or she is upset.	SE					.408
41. I play with my child when we are together.	SE					.397
44. I make sure my child gets the attention he or she needs even when my life is stressful.	PR:P		.302			.340
14. I set an example for my child of how to get along with other people.	SE					
% of Variance Explained		34	6	4	3	3
Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization. Rotation converged in 16 iterations.						

Table 8. Inter-correlations of the Protective Factors Subscales: Results from the First Field Test of the CAPF

	1 (SC)	2 (PR)	3 (CS)	4 (K)	5 (SE)
1 Social Connections (SC)	1.00				
2 Parental Resilience (PR)	.61	1.00			
3 Concrete Support … (CS)	.52	.55	1.00		
4 Knowledge of … (K)	.39	.60	.46	1.00	
5 Social & Emotional … (SE)	.54	.69	.46	.57	1.00

Appendix I provides a series of tables (Tables I-1 – I-5) that list the item statistics from the first field test that were used to select items for the second field test instrument. These statistics were used to select items that appeared most related to the construct of interest and that discriminate best between respondents who score high or low on the field test measures. These tables also indicate the recommendations for item inclusion in the second field test instrument.

Field Test 2

The second field test of the CAPF instrument was conducted from February 26 through April 8, 2014. The purpose of the second field test was to test the efficacy of the reduced set of items and to provide data for confirmatory factor analysis.

Item Selection and Instrument Design

The information provided by the first field test (described in Appendix I) was used to select

items that appeared most related to the latent constructs of interest and that discriminated best between respondents who scored high or low on the first field test measures.

Ten items in each of the five protective factors constructs[12] were selected for the second field test. Eight demographic items were also included in the field test instrument. Thus, the second field test instrument consisted of 50 items measuring the five Strengthening Families protective factors plus eight demographic items. The 50 protective factors items were presented as statements with Likert-type response options:

- This is NOT AT ALL LIKE me or what I believe
- This is NOT MUCH LIKE me or what I believe
- This is A LITTLE LIKE me or what I believe
- This is LIKE me or what I believe
- This is VERY MUCH LIKE me or what I believe

Administration

In the second field test, the CAPF was administered online and as a machine-scanned paper-and-pencil version. The online CAPF instrument was administered using Survey Monkey, which was described in the discussion of the first field test. Parents and other caregivers of children under nine years of age were again recruited through the National Strengthening Families Network and networks of multiple staff of the Center for the Study of Social Policy. The recruitment letter is provided in Appendix J.

In order to increase the pool of volunteer respondents, a paper-and-pencil version was developed. Notifications about the availability of a paper-and-pencil version of the survey were disseminated via the Strengthening Families National Network and networks of multiple staff of the Center for the Study of Social Policy. Directors and other administrators of early childhood education programs and child and family social service programs from across the country contacted the director of the QIC-EC via email and made requests for hard copies of the survey which were subsequently mailed to them.

Although the potential respondent pool was enlarged to include people outside of the Strengthening Families network and a paper-and-pencil version added, response on the second field test was much lower than it was for the first field test. One contributor to the fewer number of volunteers is that those who responded in the first field test were requested to not volunteer for the second field test.

Respondents

Usable responses from a total of 478 parents and other caregivers were collected by both types of instruments: 154 completed the online administration and 324 completed the paper-and-pencil version. Characteristics of the volunteer respondents are slightly skewed when compared to the general U.S. population. Overall, respondents were overwhelmingly female; disproportionately minority, native English speakers, and highly educated; and more likely to reside in the Northeast region of the country, when compared to the general U.S. population.

Respondents in the two types of CAPF administration also differed with respect to

[12] The reader is reminded that at the time of field test 1, the construct, Parental Resilience, was conceived of as encompassing two components: Parenting Resilience and General Life Resilience, which were measured separately. Analysis of the first field test data indicated that most of the items in the two components loaded on a single factor. Therefore, the second field test instrument included 10 items (5 from each component) to measure Parental Resilience.

several background characteristics. Respondents to the online version were more likely to be white, non-Hispanic, from the Midwest or West, and highly educated; while respondents to the paper-and-pencil version were likely to be minority, reside in the Northeast or South, and less well-educated.

There is no clear explanation for the different demographic patterns exhibited by the volunteers for the online and paper-and-pencil administrations.

Table 9. Demographic Characteristics of Field Test 2 Respondents

Characteristics	Online	Paper-Pencil	Total	US Population[1]
	%	%		%
Gender				
Female	88	89	89	51
Male	12	11	11	49
Minority status				
White non-Hispanic	70	24	38	63
Minority	30	76	62	37
Region				
Midwest	30	3	12	18
Northeast	13	31	25	18
South	10	47	35	37
West	47	19	28	23
English is main language				
Yes	97	90	92	80[2]
No	3	10	7	20
Education completed				
No formal schooling	0	1	1	<1
Elementary school	0	<1	<1	2
Middle school/ junior high	1	9	7	11
High school or GED	18	57	44	50
Trade or technical school	5	11	9	4
2-yr. college with AA degree	13	9	10	5
4-yr. college with BA/BS degree	29	8	15	18
Post graduate degree	34	4	14	10

[1]Source: 2010 United States Census
[2]English is the language spoken at home

Psychometric Analyses

The Caregivers' Assessment of Protective Factors (CAPF) was designed to assess the degree to which parents and caregivers exhibit the Strengthening Families protective factors. The goal of the second field test was to evaluate the factorial validity of the new instrument, which purports to measure the five protective factors. These protective factors are discussed in previous sections and need not be reiterated here.

Initial Confirmatory Factor Analyses

Confirmatory factor analysis (CFA) was used for verifying the factor structure of a set of observed variables (e.g., survey items) and testing the hypothesized relationship between the observed variables and their underlying latent constructs (Gurging & Hamilton, 1996; Hurley, et al., 1997; Kelloway, 1995). The objective of confirmatory factor analysis is to statistically test whether the data fit a hypothesized measurement model which is based on theory and/or previous analytic research.

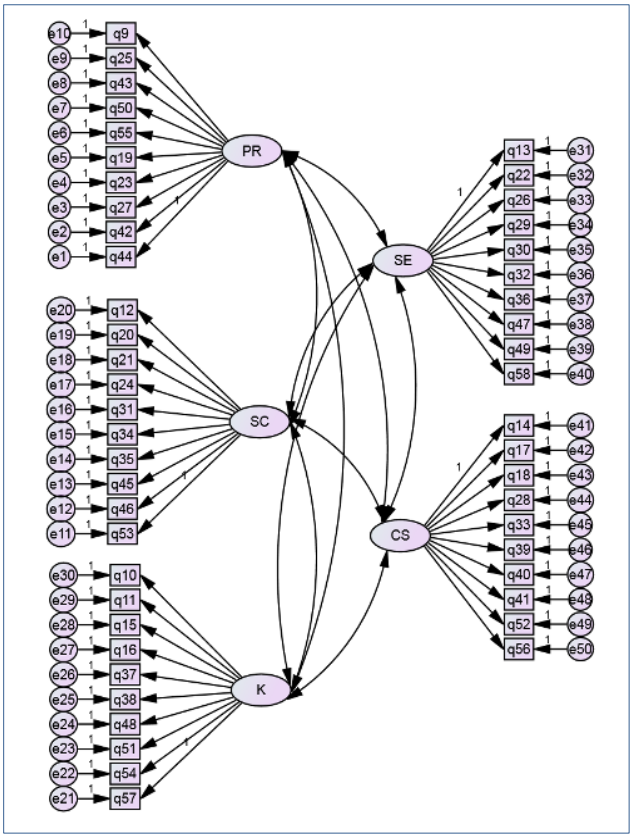
The CAPF instrument evaluated in the second field test consisted of nine demographic items and 50 protective factors items. Ten items were used to measure each of five protective factors. The second field test collected information from 478 parents and caregivers of children under nine years of age.

SPSS Analysis of Moment Structure (AMOS) software, version 22, was used to construct the CFA models. Several series of measurement models were run. The first series used the data from the second field test only which contained responses from 478 parents.

The initial model tested was a first-order model with five latent constructs (the protective factors), each measured by 10 indicators. The protective factors were

hypothesized to be inter-correlated, while errors were assumed to be uncorrelated in the initial model. A diagrammatic representation of the measurement model is presented in Figure 1.

Figure 1. Initial CFA Measurement Model of the Five Protective Factors



The unobserved variables, or latent constructs (i.e., protective factors), are represented by the ovals, while the observed variables, or indicators (i.e., items in the instrument), are represented by the rectangles. The circles represent measurement errors in the observed variables. The curved double-headed arrows indicate that the model is recursive, meaning that the latent constructs are correlated.

This is a complex model that estimates 110 parameters, 45 regression coefficients, 55 variances, and 10 factor covariances. Complex models require larger sample sizes for adequate parameter estimation. The general consensus for sample size in a CFA seems to be 10 respondents per estimated parameter (Schreiber, et al., 2006; Bryne, 2001). This "rule of thumb" implies a sample size of at least 1100 respondents needed to estimate a model of this complexity. The field test 2 sample size is only 478, which could result in unstable parameter estimation. Nevertheless, the results for this model are reported below.

There are many fit indices that may be used to determine goodness of fit. The fit indices deemed most appropriate relative to design characteristics of the study, as well as for the specifics of the sample and resultant data, are Goodness-of-fit Index (GFI), Comparative Fit Index (CFI), Parsimony Comparative Fit Index (PCFI), Root Mean Square of Approximation (RMSEA), and Hoelter's critical N, .05 (CN, .05) [see Byrne (2001) and Tanaka (1993) for discussion]. Suggested thresholds for these goodness of fit indices are provided in Table 10.

Table 10. Thresholds for Goodness of Fit Indices for CFA Models

Measure	Threshold	Comment
GFI	> .90	
CFI	> .95	> .95 great; > .90 traditional; > .80 sometimes permissible
PCFI	> .50	
RMSEA	< .05	< .05 good; .05-.10 moderate; > .10 bad
CN(.05)	> 200	
(Byrne, 2001; Hair, 2010)		

The goodness of fit indices for the initial CFA model with uncorrelated errors are:

- GFI: .67
- CFI: .74
- PCFI: .71
- RMSEA: .08
- CN(.05): 127

With 110 parameters to be estimated and 1275 data points[13] (i.e., pieces of information from which to estimate the parameters of the model, Byrne, 2001), the model is over-identified with 1165 degrees of freedom. As expected, the goodness of fit indices, which are inversely related to sample size and number of variables in the model, indicate a poor fit to the data.

Fortunately, the fact that the second field test instrument contains a subset of the items contained in the first field test instrument presented a solution to the inadequate sample size problem. Data for the 50 common, identically worded items in both field tests were combined to form a larger "sample" of 1503, more than the indicated minimum of 1110 for the complex model depicted in Figure 1. All subsequent models utilized the data from the two combined samples.

The next series of models were specified based on examination of residuals and modification indices for covariances and regression weights from preceding models. Respecification to allow for correlated errors was acceptable only when there was strong pragmatic justification (e.g., items were very similar, correlation made substantive and conceptual sense, and/or bivariate correlation between the variables was moderate to high). Successive models demonstrate improvement in the goodness of fit indices and estimated parameters. Due to the number of models estimated, only models that best explicate the development process will be discussed. Note that with re-specification based on CFA results, the confirmatory factor analysis becomes exploratory.

The first step after combining the data from the two field test samples was to run Exploratory factor analyses using the Statistical Package for the Social Sciences, version 22 (SPSS 22). Principal axis factoring with oblique (promax) rotation (kappa = 4) was used to determine the factor structure of the survey items. The unrestricted factor solution converged in eight iterations. The scree test suggested a factor structure of 5 factors, which was consistent with the five protective factors; however, many of the items in the Knowledge of Parenting and Child Development (K) factor loaded on other factors. A restricted five-factor EFA was then run to verify the structure. Specifying the number of factors in an exploratory factor analysis is more confirmatory than exploratory in nature, as is pointed out by Ferrando and Lorenzo-Seva (2000), "a study using traditional FA [factor analysis] in which the number of factors and the approximate structure are hypothesized in advance is more confirmatory than exploratory, while a study in which a poor fitting CFA is modified 'ad hoc' is more exploratory than confirmatory" (p. 303).

Restricted EFA

The five-factor solution obtained from the combined data was congruent with the hypothesized theoretical structure of the five Protective Factors except for the Knowledge of Parenting and Child Development factor. Items thought to measure this Protective Factor were distributed throughout the factors extracted by the EFA.

The results of the five-factor EFA of the 50 items included in the second field test of the CAPF instrument are provided in Table 11. The first column indicates the original construct for each item. The second column lists the items in the order of their factor loadings. The last five columns provide the factor loadings produced by the EFA. The majority of the variance is explained by the first factor, 34 percent, and the five factors

[13] Calculated as p(p+1)/2, where p is the number of variables, 50(51)/2 = 1275.

together explain about 50 percent of the variance.

Items with factor loadings less than .30 are not displayed. The reader will note that a few items cross-load on two different constructs. Item cross-loadings are not uncommon and, indeed, factor inter-correlations (resulting in factor cross-loadings) are often considered the norm in social science (cf. Costello & Osborne, 2005). The factor inter-correlations are presented in Table 12.

The results presented in Table 11 indicate that, in general, the EFA confirms the efficacy of the original measurement model of the theoretical constructs.

- All 10 items measuring the Social Connections (SC) Protective Factor load on the same factor and explain 34 percent of the variance. One item from the Concrete Support in Time of Need factor cross-loads on this factor.
- All 10 of Parental Resilience (PR) items loaded on the same factor, along with 5 items thought to measure Knowledge of Parenting and Child Development and 3 items thought to measure Social and Emotional Competence of Children.
- All 10 items measuring Concrete Support (CS) in Times of Need load on the same factor along with 3 items thought to measure Knowledge of Parenting and Child Development.
- Seven of the items thought to measure Social and Emotional Competence of Children (SE) load on the same factor. The other 3 items load on the Parental Resilience factor.
- Only 2 Knowledge of Parenting and Child Development (K) items load on the same factor. Five load with the Parental Resilience items and 3 load on the Concrete Support it Times of Need factor.

Table 12 illustrates the inter-connectedness of the SC, PR, CS, and SE constructs (factors).

Table 11. Factor Loadings Produced by the Exploratory Factor Analysis of the Second Field Test Instrument

Item	Original Construct	Factor				
		1 (SC)	2 (PR)	3 (CS)	4 (SE)	5 (K)
24. I have someone who will encourage me when I need it.	SC	.859				
12. I have someone who will help me get through tough times.	SC	.846				
20. I have someone who helps me calm down when I get upset.	SC	.804				
31. I have someone I can ask for help when I need it.	SC	.794				
21. I have someone who can help me calm down if I get frustrated with my child.	SC	.792				
34. I have someone who helps me feel good about myself.	SC	.789				
46. I have someone to talk to about important things.	SC	.741				
35. I am willing to ask for help from my family.	SC	.597				
53. I have someone who will tell me in a caring way if I need to be a better parent/caregiver.	SC	.577				
45. I have someone who will help me understand more about my child.	SC	.437		.366		
51. It is important for parents/caregivers to talk with children.	K		.802			
55. I manage the daily responsibilities of being a parent/caregiver.	PR		.707			
50. I take good care of my child even when I have personal problems.	PR		.691			
9. I feel positive about being a parent/caregiver.	PR		.689			
38. Children should be encouraged to learn new things.	K		.649			
58. I like being a parent/caregiver.	SE		.615			
25. I take good care of my child even when I am sad.	PR		.609			
42. I take care of my daily responsibilities even if problems make me sad.	PR		.592			
44. I believe that my life will get better even when bad things happen.	PR		.567			
43. I find ways to handle problems related to my child.	PR		.532			
37. I help my child learn to adjust to new things.	K		.529			
48. The way parents/caregivers treat children when they are young will influence how children act as they get older.	K		.515			.312

Item	Original Construct	Factor				
		1 (SC)	2 (PR)	3 (CS)	4 (SE)	5 (K)
23. I have the strength within myself to solve problems that happen in my life.	PR		.488			
26. I am happy when I am with my child.	SE		.484			
54. I know what toys are appropriate for children at different ages.	K		.438	.311		
47. I help my child calm down when he or she is upset.	SE		.412		.335	
27. I am confident I can achieve my goals.	PR		.390			
19. I stand up for myself when I need to.	PR		.317	.304		
18. I make an effort to learn about the resources in my community that might be helpful for me.	CS		-.302	.932		
17. I make an effort to learn about the resources in my community that might be helpful for my child.	CS			.763		
39. I am willing to ask for help from community programs or agencies.	CS			.688		
40. I know where I can get helpful information about parenting and taking care of children.	CS			.643		
56. I try to get help for myself when I need it.	CS			.538		
41. Asking for help for my child is easy for me to do.	CS			.534		
14. I don't give up when I run into problems trying to get the services I need.	CS			.507		
28. When I cannot get help right away, I don't give up until I get the help I need.	CS			.500		
33. I know where to go if my child needs help.	CS			.467		
11. I know where I can get helpful information about children's development at different ages.	K			.451		.321
52. I know where to get help if I have trouble taking care of emergencies.	CS			.394		
10. I know what children are able to do at different ages.	K			.357		
57. I know what to do to help children develop well.	K		.327	.343		
13. I maintain self-control when my child misbehaves.	SE				.811	
36. I stay calm when my child misbehaves.	SE				.746	
30. I can control myself when I get angry with my child.	SE				.677	
49. I stay patient when my child cries.	SE				.565	
22. I help my child learn to manage frustration.	SE				.451	
29. I play with my child when we are together.	SE		.345		.407	
32. I make sure my child gets the attention he or she needs even when my life is stressful.	SE		.339		.389	

Item	Original Construct	Factor				
		1 (SC)	2 (PR)	3 (CS)	4 (SE)	5 (K)
15. Holding infants a lot will NOT spoil them.	K					.621
16. Picking up infants when they cry will NOT spoil them.	K					.589
% of Variance Explained		34	5	4	3	2
Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization. Rotation converged in 8 iterations.						

Table 12. Inter-correlations of the Protective Factors Subscales: Results from the Second Field Test of the CAPF

	1 (SC)	2 (PR)	3 (CS)	4 (SE)	5 (K)
1 Social Connections (SC)	1.00				
2 Parental Resilience (PR)	.59	1.00			
3 Concrete Support … (CS)	.61	.72	1.00		
4 Social & Emotional … (SE)	.50	.67	.55	1.00	
5 Knowledge of … (K)	- .07	.10	.14	.01	1.00

The restricted EFA, as well as the initial series of CFAs, indicates the poor convergent validity of the Knowledge of Parenting and Child Development factor (subscale). In other words, the items defining this subscale do not correlate well with each other and, thus, the latent construct is not well-explained by its observed variables. Therefore, the decision was made to omit this subscale from the first release of the PAPF instrument pending future development.

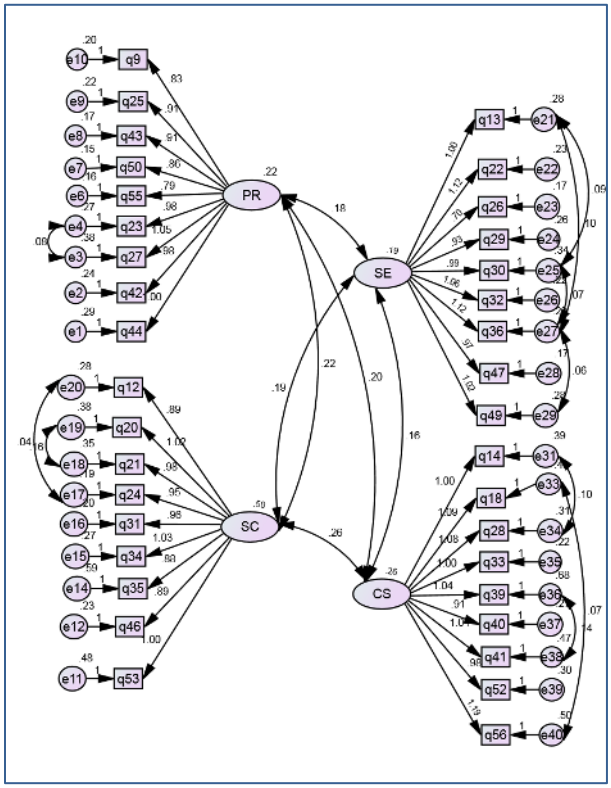
The EFA and CFA analyses also indicate items in the remaining four protective factors subscales that should be eliminated due to low factor loadings, increased reliability if deleted, and improved goodness of fit statistics when eliminated. The final CFA model evaluated consists of nine items measuring each of four constructs, for a total of 36 items.

Final CFA Models

Construction of the final CFA model was a two-step process. First, the final *first-order model* was specified to evaluate the correlations among the factors and to compute composite reliability, convergent validity, and discriminant validity. Next, the final model, a *second-order model*, was specified that hypothesized that the four protective factors constructs are indicators of an over-arching higher order theoretical construct, Protective Factors (PF).

Final First-order CFA Model. The first step in constructing the final model is estimating the first-order model. This model is depicted in Figure 2.

Figure 2. Final First-Order CFA Measurement Model of the Four Protective Factors



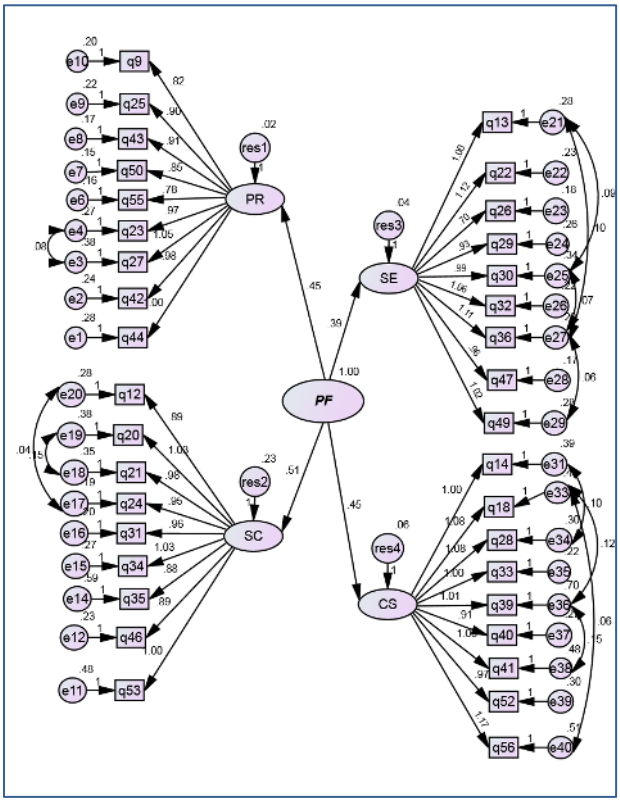
The parameter estimates for this model are provided in Appendix K.

Final Second-order CFA Model. The final CFA model is a second-order factorial model. Assumptions for this model are:

- Responses to the CAPF (and subsequently, the PAPF) can be explained by four first-order factors (Social Connections, Parental Resilience, Concrete Support in Times of Need and Social and Emotional Competence of Children) and one second-order factor (Protective Factors).
- Each item has a non-zero loading on the first-order factor it was designed to measure, and zero loadings on the other three first-order factors.
- Several of the error terms are correlated.
- Covariation among the four first-order factors can be explained fully by their regression on the second-order factor.

A diagrammatic representation of this model, with regression coefficients, is presented in Figure 3. The straight, single-headed arrows between the second-order factor (the latent construct, PF) and the four first order factors (the individual protective factors constructs) represent the covariation among the first order factors that is explained by the higher order theoretical construct, Protective Factors.

Figure 3. Final CFA Measurement Model of the Four Protective Factors



In this second-order CFA model, a higher order Protective Factors factor is hypothesized as accounting for, or explaining all variance and covariance related to the first-order factors, PR, SC, SE, and CS.

This is a complex model that estimates 87 parameters (32 first-order regression coefficients, 37 measurement error variances, 4 second-order regression coefficients, 4 residual terms, and 10 error covariances). Complex models require larger sample sizes

for adequate parameter estimation. The general consensus of 10 respondents per estimated parameter implies a sample size of at least 870 respondents needed to estimate a model of this complexity. Thus, the sample size of 1503 should be sufficient for model estimation. With 666 pieces of information[14] in the sample variance-covariance matrix, the model is over-identified with 579 degrees of freedom. Parameter estimates for this model are provided in Appendix L.

Goodness of Fit. The goodness of fit indices deemed most appropriate for the design characteristics of the study, as well as for the specifics of the sample and data, are Goodness-of-fit Index (GFI), Comparative Fit Index (CFI), Parsimony Comparative Fit Index (PCFI), Root Mean Square of Approximation (RMSEA), and Hoelter's critical N, .05 (CN, .05) [see Byrne (2001) and Tanaka (1993) for discussion]. Suggested thresholds for these goodness of fit indices are provided in Table 10 and are not reiterated here.

The goodness of fit indices for the final second-order CFA model compared to the fit indices obtained by the initial first-order CFA model are shown in Table 13.

Table 13. Goodness of Fit Indices for the Initial First-Order Final and Second-Order CFA Models

Measure	Initial First-Order Model	Final Second-Order Model
GFI	.67	.89
CFI	.74	.91
PCFI	.71	.83
RMSEA	.08	.00
CN(.05)	127	282

[14] Calculated as p(p+1)/2, where p is the number of variables, 36(37)/2 = 666.

The final model based on the combined field test samples (n = 1503) demonstrates significant improvement in goodness of fit over the initial first-order CFA model with uncorrelated errors based on the second field test sample only (n = 478). The goodness of fit statistics of the final model surpass the minimum thresholds for four of the five indices (CFI, PCFI, PMSEA, and CN .05) and very nearly meets the GFI threshold of .90 or greater (.89). These goodness of fit statistics indicate that some degree of misfit still exists, although the results are better than those obtained in many studies of items designed to measure attitudes, beliefs, personality, or other clinical constructs. In a report of their review of 51 published applications of EFA and CFA, Ferrando and Lorenzo-Seva (2000) state:

> *A pervasive problem in the structural analysis of items designed to measure personality, attitude, psychopathology and other clinical constructs is that structures which were obtained using Exploratory Factor Analysis (EFA) tend to be rejected when tested statistically using a Confirmatory Factor Analysis (CFA) model.… [A] CFA model based on [the] EFA solution is tested in a new sample with the result that the model fits very badly. However, the fit might also be bad when the CFA is fitted to the same sample in which the EFA seems to produce a good solution* (p. 301).

The final CFA model described above appears to be a better solution than many of those reviewed by Ferrando and Lorenzo-Seva.

Reliability of the Final CFA Model. The revisions to the original CAPF instrument (elimination of the Knowledge of Parenting and Child Development protective factor and one item from each of the remaining four protective factors) resulted in a highly reliable instrument, the Parents' Assessment of Protective Factors (PAPF), that measures four protective factors, parental resilience, social

connections, concrete support in times of need, and social and emotional competence of children.

The reliability of the protective factors subscales is estimated using three measures, Cronbach's coefficient alpha (α), composite reliability (CR), and average variance extracted (AVE). AVE and its relationship to CR are also criteria for establishing convergent validity, discussed in the next section. Using the CR and AVE values in conjunction is based on the two-step procedure recommended in Anderson and Gerbing (1988).

Nunnally (1978) and Nunnally and Bernstein (1994) recommend 0.7 as the minimum threshold for Cronbach's α. The suggested thresholds (Hair, et. al., 2010) for α, composite reliability, and AVE are:

- α > 0.7
- CR > 0.7
- AVE > 0.5
- CR > AVE

The reliability coefficients and AVE for each of the subscales in the final CFA model are shown in Table 14.

Table 14. Reliability Statistics for the Protective Factors Subscales

Subscale	α	CR	AVE	CR > AVE?
Parental Resilience	.88	.95	.67	Yes
Social Connections	.93	.94	.64	Yes
Concrete Support in Times of Need	.87	.90	.51	Yes
Social & Emotional Competence of Children	.88	.94	.64	Yes

The protective factors subscales appear to be highly reliable, with internal consistency (α) coefficients ranging from .87 to .93. The alpha for the entire PFI is .95. The composite reliability of each subscale is greater than .90 (lower threshold is 0.70). The Social Connections subscale shows the strongest internal consistency (α = .93), while the Parental Resilience subscale demonstrates the highest overall reliability (CR = .95).

The recommended lower threshold for average variance extracted (AVE) is 0.50. An AVE of less than 0.50 indicates that on average, there is more error remaining in the items than there is variance explained by the latent factor structure imposed on the measure. Thus, Table 14 indicates that slightly more than 50 percent of the variance in the Concrete Support in Times of Need subscale is explained by the construct indicators (items), while over 60 percent of the variance in the other three constructs is explained by their indicators.

The last criterion suggested by Hair et.al. (2010) for assessing reliability, that the composite reliability should exceed the average variance extracted (CR > AVE), is met by all four subscales. The CR values range from .90 to .95, while the AVE values range from .51 to .67.

Thus, the four subscales and the Protective Factors Index are reliable measures of parents' perceptions of their beliefs, feelings, and behaviors with regard to the Strengthening Families protective factors indicators.

Validity of the Final CFA Model. Results of the final CFA model of four factors and 36 items indicate good convergent validity, but inadequate discriminant validity. Convergent validity of a subscale is assessed by comparing the values of the composite reliabilities (CR) to the average variance extracted (AVE) of the latent construct. The CR should be larger than the AVE and AVE

should be greater than 0.5 while CR should be greater than 0.7 (Hair, et. al., 2010).

As shown in Table 14, each of the four subscales meets these three criteria, thus establishing strong convergent validity of the subscales. The CR value for each of the subscales exceeds 0.9, while the AVE values range from .51 for Concrete Support in Times of Need to .67 for Parental Resilience. In each case, CR exceeds AVE.

Discriminant validity of a subscale is assessed by comparing maximum shared variance (MSV), average shared variance (ASV) and average variance extracted (AVE). The Hair et. al. (2010) thresholds for determining discriminant validity are:

- MSV < AVE
- ASV < AVE

MSV, AVE and ASV for the four subscales based on the field test samples are provided in Table 15.

Table 15. Discriminant Validity Statistics for the Protective Factors Subscales

Subscale	MSV	ASV	AVE	MSV < AVE?	ASV < AVE?
Parental Resilience	.77	.62	.67	No	Yes
Social Connections	.52	.45	.64	Yes	Yes
Concrete Support in Times of Need	.67	.58	.51	No	No
Social & Emotional Competence of Children	.77	.57	.64	No	Yes

Evidence for discriminant validity is mixed. However, this is to be expected. The theoretical constructs defining the protective factors, parental resilience, social connections, concrete support in times of need, and social and emotional competence of children, *are* interrelated; therefore, the subscales are correlated. The discriminant validity patterns also are consistent with the hypothesized relationships. Development of the instrument took this reality into account and is described in detail earlier in this chapter and in Chapter 6.

The Parental Resilience (PR), Social and Emotional Competence of Children (SE) and Concrete Support in Times of Need (CS) subscales are highly inter-correlated, while the Social Connections (SC) subscale appears well-defined, with moderate correlation with the other subscales. Table 16 provides the bivariate correlation coefficients and the square root of the average variance extracted (AVE) for the subscales. Taking the square root of the AVE makes it directly comparable to the correlation coefficient. The AVE is the average amount of variance that a latent construct is able explain in the observed variables to which it is theoretically related, while the bivariate correlation coefficient indicates the strength and direction of the relationship between two latent constructs. In Table 16, the square root of the AVE is provided on the diagonal while the off-diagonal elements are the bivariate correlation coefficients. All correlations are significant.

Table 16. Inter-Correlations of the Protective Factors Subscales

	PR	SC	SE	CS
PR	**.82**			
SC	.65	**.80**		
SE	.88	.63	**.80**	
CS	.82	.72	.73	**.72**

[a] The square roots of the AVE values are provided on the diagonal.

Table 16 indicates several discriminant validity issues, particularly with regard to Concrete Support in Times of Need (CS). The square root of the AVE for CS (.72) is less

than or equal to the absolute values of the correlations between CS and PR (.82), SC (.72), or SE (.73). Thus, the Parental Resilience (PR) and Social and Emotional Competence of Children (SE) latent factors explain more of the variance in the CS observed variables (items) than does the CS latent construct, while the SC latent factor explains as much variance in the CS observed variables as does the CS latent construct. Also the square root of the AVE for SE (.80) is less than the absolute value of the correlation between SE and PR (.88). This means that the PR latent construct explains more of the variance in the SE observed variables (items) than does the SE latent construct, despite the fact that those variables are supposed to be measures of Social and Emotional Competence of Children, not Parental Resilience.

The issues with discriminant validity and inter-correlations among the subscales on the CAPF and PAPF discussed above should remind the user of the PAPF that, by their very nature, the Protective Factors are inter-related. For example, the degree of resilience a parent exhibits in the face of stress or adversity may depend on the level and quality of the parent's social connections and concrete support in times of need. Parental resilience also is related to nurturing children and enhancing their social and emotional competence. These inter-relationships do not necessarily mean that these factors should be combined into one factor. Rather, the EFA indicates that the factors are distinct constructs. However, the second-order CFA model shown in Figure 3 also hypothesizes that the four protective factors constructs, while remaining separate constructs, are indicators of an over-arching theoretical construct. The Strengthening Families concept of the protective factors, measured by the PAPF, is that the individual protective factors are separate but related, and are part of a larger context. Protective factors are conceived of in this context as conditions or attributes of individuals, families, communities, or the larger society that both mitigate risk factors and actively enhance well-being.

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Appendix A
Parents' Assessment of Protective Factors Instruments and Scoring Sheets

The PAPF is intended for parents and other primary caregivers of young children, ages birth through eight years. The PAPF is appropriate for administration to both adult and adolescent parents and caregivers who have a least a fifth-grade reading level. It is designed to be a paper-and-pencil, self-administered instrument; however, it may also be administered by agency and service provider support staff.

The PAPF instrument and scoring sheet are provided in both English and Spanish. Both versions of the instrument and scoring sheet are provided in this Appendix.

Parents' Assessment of Protective Factors

The Parents' Assessment of Protective Factors (PAPF) is a list of 36 statements that describe you as a parent or caregiver. Some of the statements will describe you very well. Other statements will not describe you at all.

Before showing you these 36 statements, the survey begins with 10 important questions about yourself and the youngest child in your care.

This survey should take only a few minutes to complete.

You are encouraged to respond to every statement.

This product was developed by the National Quality Improvement Center on Early Childhood (QIC-EC). The QIC-EC was funded by the U.S. Department of Health and Human services, Administration for Children, Youth and Families, Office on Child Abuse and Neglect, under Cooperative Agreement 90CA1763.

Background Information

Before you take the survey, we need some important information from you.

Please fill in all the blanks and circles that best describe you.

Please print legibly. Fill in only one circle for each statement like this: ●

1. Today's Date: _____ _____ _____ (For example, *November 3, 2014 would be printed 11 03 2014*)
   Month Day Year

2. Your City of Residence: _____

3. Your State of Residence: _____

4. Child's Age (age of the youngest child in your care): O Birth-2 yrs old O 3-5 yrs O 6-8 yrs old O 9+ yrs old

5. Child's Gender (gender of the youngest child in your care): O Male O Female

6. Your Gender: O Male O Female

7. Your Age: O 13-19 yrs old O 30-39 yrs old O 50-59 yrs old O 70-79 yrs old O 20-29 yrs old O 40-49 yrs old O 60-69 yrs old O 80+ yrs old

8. Your Racial/Ethnic Identification (select only ONE):
   - O Biracial or Multiracial
   - O African American or Black
   - O Asian or Asian American
   - O Caribbean Islander or African National
   - O Caucasian, White, or European American
   - O Hispanic or Latino
   - O Middle Eastern
   - O Native American or Alaskan Native
   - O Native Hawaiian or Pacific Islander
   - O Other (please specify): _____

9. Your HIGHEST Education level COMPLETED (select only ONE):
   - O No formal education
   - O Elementary school
   - O Middle school/junior high
   - O High school
   - O GED
   - O Trade/Technical school
   - O 2 year college with Associate's degree
   - O 4 year collect with Bachelor's degree
   - O Post graduate degree

10. Your Main Language: O English O Spanish O Other (please specify): _____

Continue on Next Page

For Administrative Purposes Only

Parent Statements

DIRECTIONS: There are 4 groups of statements in this survey. In responding to each statement, focus on the youngest child in your care who is between birth and 8-years-old.

In responding to the statements, please keep 3 points in mind:

1. **You should respond truthfully to each statement. There are no right or wrong answers – only your opinions.**
2. **Some statements may seem like others, but no two statements are exactly the same.**
3. **You are encouraged to respond to <u>every</u> statement.**

Read each statement and fill in the circle that best describes you during the last couple of months.

Fill in <u>only</u> <u>one</u> circle for each statement like this: ●

	This is NOT AT ALL LIKE me or what I believe	This is NOT MUCH LIKE me or what I believe	This is A LITTLE LIKE me or what I believe	This is LIKE me or what I believe	This is VERY MUCH LIKE me or what I believe
11. I feel positive about being a parent/caregiver.	O	O	O	O	O
12. I take good care of my child even when I am sad.	O	O	O	O	O
13. I find ways to handle problems related to my child.	O	O	O	O	O
14. I take good care of my child even when I have personal problems.	O	O	O	O	O
15. I manage the daily responsibilities of being a parent/caregiver.	O	O	O	O	O
16. I have the strength within myself to solve problems that happen in my life.	O	O	O	O	O
17. I am confident I can achieve my goals.	O	O	O	O	O
18. I take care of my daily responsibilities even if problems make me sad.	O	O	O	O	O
19. I believe that my life will get better even when bad things happen.	O	O	O	O	O

Continue on Next Page

	This is NOT AT ALL LIKE me or what I believe	This is NOT MUCH LIKE me or what I believe	This is A LITTLE LIKE me or what I believe	This is LIKE me or what I believe	This is VERY MUCH LIKE me or what I believe
20. I have someone who will help me get through tough times.	O	O	O	O	O
21. I have someone who helps me calm down when I get upset.	O	O	O	O	O
22. I have someone who can help me calm down if I get frustrated with my child.	O	O	O	O	O
23. I have someone who will encourage me when I need it.	O	O	O	O	O
24. I have someone I can ask for help when I need it.	O	O	O	O	O
25. I have someone who will tell me in a caring way if I need to be a better parent/caregiver.	O	O	O	O	O
26. I have someone who helps me feel good about myself.	O	O	O	O	O
27. I am willing to ask for help from my family.	O	O	O	O	O
28. I have someone to talk to about important things.	O	O	O	O	O

	This is NOT AT ALL LIKE me or what I believe	This is NOT MUCH LIKE me or what I believe	This is A LITTLE LIKE me or what I believe	This is LIKE me or what I believe	This is VERY MUCH LIKE me or what I believe
29. I don't give up when I run into problems trying to get the services I need.	O	O	O	O	O
30. I make an effort to learn about the resources in my community that might be helpful for me.	O	O	O	O	O
31. When I cannot get help right away, I don't give up until I get the help I need.	O	O	O	O	O
32. I know where to go if my child needs help.	O	O	O	O	O
33. I am willing to ask for help from community programs or agencies.	O	O	O	O	O
34. I know where I can get helpful information about parenting and taking care of children.	O	O	O	O	O
35. Asking for help for my child is easy for me to do.	O	O	O	O	O
36. I know where to get help if I have trouble taking care of emergencies.	O	O	O	O	O
37. I try to get help for myself when I need it.	O	O	O	O	O

Continue on Next Page

	This is NOT AT ALL LIKE me or what I believe	This is NOT MUCH LIKE me or what I believe	This is A LITTLE LIKE me or what I believe	This is LIKE me or what I believe	This is VERY MUCH LIKE me or what I believe
38. I maintain self-control when my child misbehaves.	O	O	O	O	O
39. I help my child learn to manage frustration.	O	O	O	O	O
40. I stay patient when my child cries.	O	O	O	O	O
41. I play with my child when we are together.	O	O	O	O	O
42. I can control myself when I get angry with my child.	O	O	O	O	O
43. I make sure my child gets the attention he or she needs even when my life is stressful.	O	O	O	O	O
44. I stay calm when my child misbehaves.	O	O	O	O	O
45. I help my child calm down when he or she is upset.	O	O	O	O	O
46. I am happy when I am with my child.	O	O	O	O	O

STOP

PAPF Scoring Sheet

Protective Factors Profile

Average Score	Parental Resilience	Social Connections	Concrete Support in Times of Need	Social & Emotional Competence of Children	Protective Factors Index (PFI)	Protective Factors Strength Level
4.00	.	.	.	.	.	**Maximum**
3.90	.	.	.	.	.	**High**
3.80	.	.	.	.	.	
3.70	.	.	.	.	.	
3.60	.	.	.	.	.	
3.50	.	.	.	.	.	
3.40	.	.	.	.	.	
3.30	.	.	.	.	.	
3.20	.	.	.	.	.	
3.10	.	.	.	.	.	
3.00	.	.	.	.	.	
2.90	.	.	.	.	.	**Moderate**
2.80	.	.	.	.	.	
2.70	.	.	.	.	.	
2.60	.	.	.	.	.	
2.50	.	.	.	.	.	
2.40	.	.	.	.	.	
2.30	.	.	.	.	.	
2.20	.	.	.	.	.	
2.10	.	.	.	.	.	
2.00	.	.	.	.	.	
1.90	.	.	.	.	.	**Low**
1.80	.	.	.	.	.	
1.70	.	.	.	.	.	
1.60	.	.	.	.	.	
1.50	.	.	.	.	.	
1.40	.	.	.	.	.	
1.30	.	.	.	.	.	
1.20	.	.	.	.	.	
1.10	.	.	.	.	.	
1.00	.	.	.	.	.	
0.90	.	.	.	.	.	
0.80	.	.	.	.	.	
0.70	.	.	.	.	.	
0.60	.	.	.	.	.	
0.50	.	.	.	.	.	
0.40	.	.	.	.	.	
0.30	.	.	.	.	.	
0.20	.	.	.	.	.	
0.10	.	.	.	.	.	
0.00	.	.	.	.	.	

Parental Resilience Total: _____

Parental Resilience Average Score: _____
(Total ÷ no. of items)

Social Connections Total: _____

Social Connections Average Score: _____
(Total ÷ no. of items)

Concrete Support in Times of Need
Total: _____

Concrete Support in Times of Need
Average Score: _____
(Total ÷ no. of items)

Social and Emotional Competence
Of Children Total: _____

Social and Emotional Competence
Of Children Average Score: _____
(Total ÷ no. of items)

Protective Factors Index Total: _____
(Grand Total of protective factors totals)

Protective Factors Index: _____
(PFI Total ÷ total no. of items)

For Administrative Purposes Only

Evaluación de los factores de protección para padres

La evaluación de los factores de protección para padres (*Parents' Assessment of Protective Factors*, PAPF) es una lista de 36 expresiones que lo describen a usted como padre o cuidador. Algunos de las expresiones lo describirán muy bien. Otras expresiones no lo describirán en absoluto.

Antes de mostrarle estas 36 expresiones, la encuesta comienza con 10 preguntas importantes sobre usted y el menor de los niños a su cuidado.

Completar esta encuesta le tomará sólo unos minutos.

Se le recomienda que responda a todas las expresiones.

Este producto fue desarrollado por el Centro Nacional de Mejora de Calidad en la Primera Infancia (QIC-EC). El QIC-EC fue fundado por el Departamento de Salud y Servicios Humanos de los EE. UU., la Administración para Niños, Jóvenes y Familias, la Oficina sobre el Abuso y el Abandono Infantil, conforme al Acuerdo Cooperativo 90CA1763.

Información del Participante

Antes de tomar la encuesta, necesitamos que nos brinde información importante sobre usted.

Llene todos los espacios en blanco y marque los círculos que lo describen mejor.

Escriba en letra de molde legible. Llene sólo un círculo para cada frase así: ●

1. Fecha de hoy: _____ _____ _____ (*Por ejemplo, 4 de agosto de 2014 debería escribirse 08 04 2014*)
   Mes Día Año

2. Su ciudad de residencia: _____

3. Su estado de residencia: _____

4. Edad del niño (edad del menor de los niños a su cuidado): O De 0 a 2 años O De 3 a 5 años O De 6 a 8 años O Más de 9 años

5. Sexo del niño (sexo del menor de los niños a su cuidado): O Masculino O Femenino

6. Su sexo: O Masculino O Femenino

7. Su edad: O De 13 a 19 años O De 20 a 29 años O De 30 a 39 años O De 40 a 49 años O De 50 a 59 años O De 60 a 69 años O De 70 a 79 años O Más de 80 años

8. Su identificación de raza/etnia (seleccione solo UNA):
   - O Biracial o multiracial
   - O Afroamericano o negro
   - O Asiático o asiáticoamericano
   - O Caribeño o de un país africano
   - O Caucásico, blanco o europeo americano
   - O Hispano o latino
   - O Del Medio oriente
   - O Nativo americano o de Alaska
   - O Nativo de Hawái o de las Islas del Pacífico
   - O Otro (especifique): _____

9. Su nivel de educación MÁS ALTO ALCANZADO (seleccione solo UNA):
   - O Sin educación formal
   - O Escuela primaria
   - O Escuela media/escuela intermedia
   - O Escuela secundaria
   - O Diploma de equivalencia general (GED)
   - O Escuela de formación profesional/técnica
   - O Universidad de 2 años con título de asociado
   - O Universidad de 4 años con título de bachillerato
   - O Título de postgrado

10. Su idioma principal: O Inglés O Español O Otro (especifique): _____

Continúa en la página siguiente

Únicamente con fines administrativos

Expresiones para el padre

INSTRUCCIONES: Hay 4 grupos de expresiones en esta encuesta. Cuando responda a cada expresión, enfóquese en el menor de los niños a su cuidado que tenga entre 0 y 8 años.

Cuando responda a las expresiones, tenga en cuenta 3 puntos:

1. **Debe responder honestamente cada expresión. No existen respuestas correctas o incorrectas—solo sus opiniones.**

2. **Algunas expresiones pueden parecerse a otras, pero nunca dos expresiones serán exactamente las mismas.**

3. **Se le recomienda que responda a <u>todas</u> las expresiones.**

Llene <u>solo un</u> círculo para cada expresión así: ●

	Esto NO ME DESCRIBE EN ABSOLUTO ni es lo que creo.	Esto NO ME DESCRIBE MUCHO ni es lo que creo.	Esto ME DESCRIBE UN POCO y es lo que creo.	Esto ME DESCRIBE y también es lo que creo.	Esto ME DESCRIBE MUCHO y también es lo que creo.
11. Me siento bien como padre/cuidador.	O	O	O	O	O
1. Cuido bien a mi hijo aun cuando estoy triste.	O	O	O	O	O
2. Encuentro maneras de resolver los problemas relacionados con mi hijo.	O	O	O	O	O
3. Cuido bien a mi hijo aun cuando tengo problemas personales.	O	O	O	O	O
4. Manejo bien las responsabilidades diarias de ser padre/cuidador.	O	O	O	O	O
5. Tengo la fortaleza en mi interior para resolver los problemas que ocurren en mi vida.	O	O	O	O	O
6. Estoy convencido de que puedo lograr mis objetivos.	O	O	O	O	O
7. Me ocupo de mis responsabilidades diarias aun cuando los problemas me entristecen.	O	O	O	O	O
8. Considero que mi vida mejorará aun cuando ocurran cosas malas.	O	O	O	O	O

Continúa en la página siguiente

	Esto NO ME DESCRIBE EN ABSOLUTO ni es lo que creo.	Esto NO ME DESCRIBE MUCHO ni es lo que creo.	Esto ME DESCRIBE UN POCO y es lo que creo.	Esto ME DESCRIBE y también es lo que creo.	Esto ME DESCRIBE MUCHO y también es lo que creo.
9. Conozco a alguien que me ayudará a superar los momentos difíciles.	O	O	O	O	O
10. Conozco a alguien que me ayuda a calmarme cuando me enojo.	O	O	O	O	O
11. Conozco a alguien que me ayuda a calmarme si me frustro con mi hijo/a.	O	O	O	O	O
12. Conozco a alguien que me animará cuando lo necesite.	O	O	O	O	O
13. Conozco a alguien a quien puedo pedir ayuda cuando la necesite.	O	O	O	O	O
14. Conozco a alguien que me dirá de manera cuidadosa si necesito ser un mejor padre/cuidador.	O	O	O	O	O
15. Conozco a alguien que me ayuda a sentirme bien de mí mismo.	O	O	O	O	O
16. Estoy dispuesto a pedir la ayuda de mi familia.	O	O	O	O	O
17. Tengo a alguien con quien hablar sobre asuntos importantes.	O	O	O	O	O

	Esto NO ME DESCRIBE EN ABSOLUTO ni es lo que creo.	Esto NO ME DESCRIBE MUCHO ni es lo que creo.	Esto ME DESCRIBE UN POCO y es lo que creo.	Esto ME DESCRIBE y también es lo que creo.	Esto ME DESCRIBE MUCHO y también es lo que creo.
18. No me doy por vencido cuando me enfrento con problemas al intentar obtener los servicios que necesito.	O	O	O	O	O
19. Me esfuerzo por aprender sobre los recursos en mi comunidad que pueden ser útiles para mí.	O	O	O	O	O
20. Cuando no puedo obtener ayuda de inmediato, no me doy por vencido hasta que obtengo la ayuda que necesito.	O	O	O	O	O
21. Sé a dónde dirigirme si mi hijo/a necesita ayuda.	O	O	O	O	O
22. Estoy dispuesto a solicitar ayuda de programas o agencias comunitarias.	O	O	O	O	O
23. Sé en dónde puedo obtener información útil sobre la paternidad y el cuidado de los hijos/as.	O	O	O	O	O
24. Me resulta fácil pedir ayuda para mi hijo/a.	O	O	O	O	O
25. Sé en dónde puedo recibir ayuda si tengo problemas para atender emergencias.	O	O	O	O	O
26. Trato de pedir ayuda para mí cuando la necesito.	O	O	O	O	O

Continúa en la página siguiente

	Esto NO ME DESCRIBE EN ABSOLUTO ni es lo que creo.	Esto NO ME DESCRIBE MUCHO ni es lo que creo.	Esto ME DESCRIBE UN POCO y es lo que creo.	Esto ME DESCRIBE y también es lo que creo.	Esto ME DESCRIBE MUCHO y también es lo que creo.
27. Yo mantengo el control cuando mi hijo/a se porta mal.	O	O	O	O	O
28. Ayudo a que mi hijo/a aprenda a controlar la frustración.	O	O	O	O	O
29. Mantengo la paciencia cuando mi hijo/a llora.	O	O	O	O	O
30. Juego con mi hijo/a cuando estamos juntos.	O	O	O	O	O
31. Me puedo controlar a mí mismo cuando me enojo con mi hijo/a.	O	O	O	O	O
32. Me aseguro de que mi hijo/a reciba la atención que necesita aún cuando mi vida es estresante.	O	O	O	O	O
33. Mantengo la calma cuando mi hijo/a se porta mal.	O	O	O	O	O
34. Ayudo a que mi hijo/a se calme cuando está enojado.	O	O	O	O	O
35. Me siento feliz cuando estoy con mi hijo/a.	O	O	O	O	O

Hoja de calificaciones de la Evaluación de los Factores de Protección para Padres (PAPF)

Resilencia (o capacidad) de los padres – Total: _____

Resilencia (o capacidad) de los padres – Calificación promedio: _____
(Total ÷ N. ° de opciones)

Conexiones sociales – Total: _____

Conexiones sociales – Calificación promedio: _____
(Total ÷ N. ° de opciones)

Apoyo concreto en momentos de necesidad – Total: _____

Apoyo concreto en momentos de necesidad – Calificación promedio: _____
(Total ÷ N. ° de opciones)

Competencia social y emocional de los hijos – Total: _____

Competencia social y emocional de los hijos – Calificación promedio: _____
(Total ÷ N. ° de opciones)

Indicador de los factores de protección (PFI) – Total: _____
(Gran total de los factores de protección)

Indicador de los factores de protección: _____
(Total de PFI ÷ N. ° total de opciones)

Para fines administrativos solamente

Perfil de los factores de protección

Calificación promedio	Resilencia (o capacidad) de los padres	Conexiones sociales	Apoyo concreto en momentos de necesidad	Competencia social y emocional de los hijos	Indicador de los factores de protección (PFI)	Nivel de fortaleza de los factores de protección
4.00	.	.	.	.	.	Máximo
3.90	.	.	.	.	.	
3.80	.	.	.	.	.	
3.70	.	.	.	.	.	
3.60	.	.	.	.	.	
3.50	.	.	.	.	.	Alto
3.40	.	.	.	.	.	
3.30	.	.	.	.	.	
3.20	.	.	.	.	.	
3.10	.	.	.	.	.	
3.00	.	.	.	.	.	
2.90	.	.	.	.	.	
2.80	.	.	.	.	.	
2.70	.	.	.	.	.	
2.60	.	.	.	.	.	
2.50	.	.	.	.	.	Moderado
2.40	.	.	.	.	.	
2.30	.	.	.	.	.	
2.20	.	.	.	.	.	
2.10	.	.	.	.	.	
2.00	.	.	.	.	.	
1.90	.	.	.	.	.	
1.80	.	.	.	.	.	
1.70	.	.	.	.	.	
1.60	.	.	.	.	.	
1.50	.	.	.	.	.	
1.40	.	.	.	.	.	
1.30	.	.	.	.	.	
1.20	.	.	.	.	.	
1.10	.	.	.	.	.	
1.00	.	.	.	.	.	Bajo
0.90	.	.	.	.	.	
0.80	.	.	.	.	.	
0.70	.	.	.	.	.	
0.60	.	.	.	.	.	
0.50	.	.	.	.	.	
0.40	.	.	.	.	.	
0.30	.	.	.	.	.	
0.20	.	.	.	.	.	
0.10	.	.	.	.	.	
0.00	.	.	.	.	.	

Appendix B
Example of a Completed PAPF Scoring Sheet

An example of a completed Scoring Sheet is presented. Instructions for filling out the Scoring Sheet after administering the PAPF are found in Chapter 3.

PAPF Scoring Sheet

Parental Resilience Total: 16

Parental Resilience Average Score: 1.8
(Total ÷ no. of items)

Social Connections Total: 7

Social Connections Average Score: .8
(Total ÷ no. of items)

Concrete Support in Times of Need Total: 13

Concrete Support in Times of Need Average Score: 1.4
(Total ÷ no. of items)

Social and Emotional Competence Of Children Total: 25

Social and Emotional Competence Of Children Average Score: 2.8
(Total ÷ no. of items)

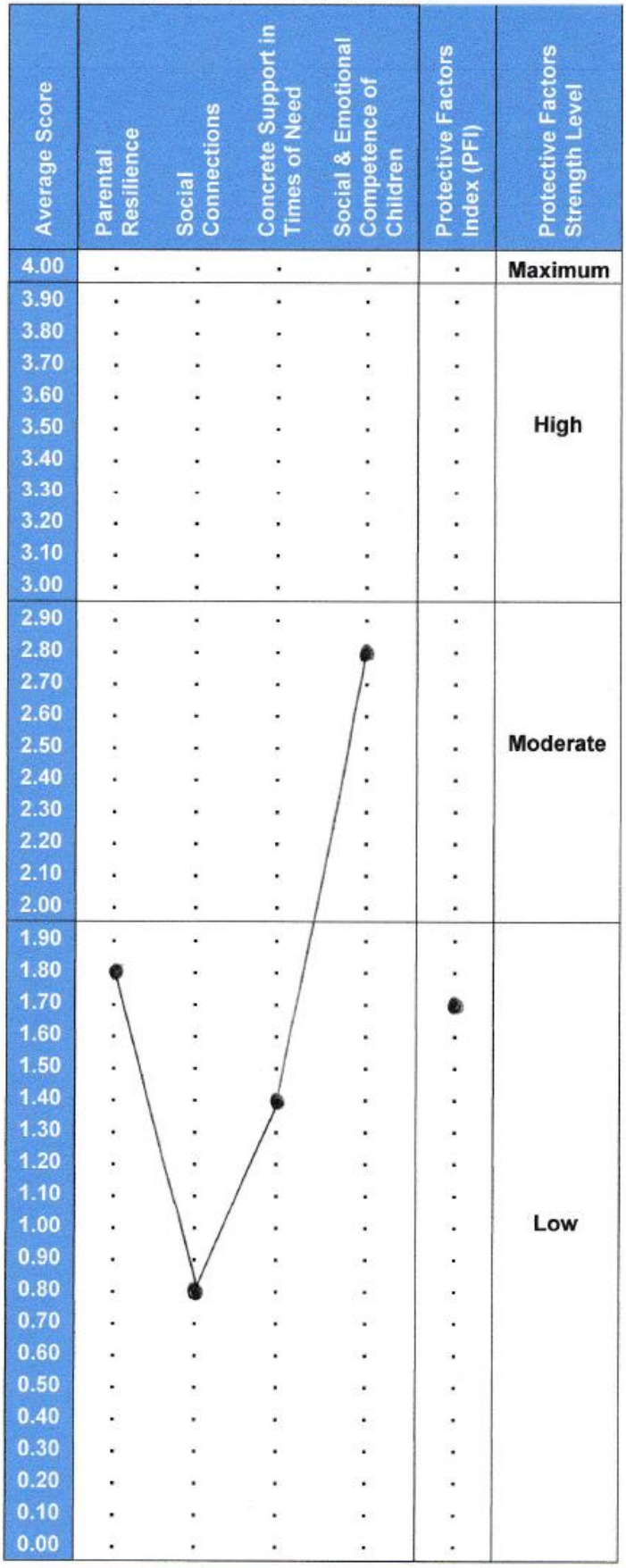
Protective Factors Index Total: 61

Protective Factors Index: 1.7
(PFI Total ÷ total no. of items)

For administrative purposes only: identifying information

29688

Protective Factors Profile



Appendix C
Instruments Reviewed for Development of the Item Pool for the Caregivers' Assessment of Protective Factors

1. Parenting Scale (PS)
2. Parenting Sense of Competence Scale (PSOC)
3. Parenting Skills Scale (PSS)
4. Perceived Stress Scale
5. New General Self-Efficacy Scale
6. General Perceived Self-Efficacy Scale
7. Parental Control Subscale of the Parenting Locus of Control Scale
8. The Perceived Maternal Parenting Self-Efficacy Questionnaire
9. The Self-Efficacy for Parenting Tasks Index—Toddler Scale (SEPTI-TS)
10. Tool to Measure Parenting Self-Efficacy (TOPS)
11. The Parenting Skills Assessment (PSA)
12. Parenting Tasks Checklist
13. Parenting Style Survey
14. Family Impact of Child Disability Scale (FICD)
15. The Child Rearing Practices Report
16. Feelings and Moods in Motherhood Questionnaire
17. Karitane Parenting Confidence Scale
18. Social Support Questionnaire (SSQ)
19. Social Support Questionnaire for Children (SSQC)
20. Parent-Child Relationship Inventory
21. Multidimensional Scale of Perceived Social Support
22. Social Support Network Questionnaire
23. Social Support Scale
24. Duke Social Support and Stress Scale (DUSOCS)
25. Perceived Social Support—Family
26. Perceived Social Support—Friends

27. Parental Nurturance Scale (PNS)
28. Parental Authority Questionnaire (PAQ)
29. Family Adaptability and Cohesion Evaluation Scales-III (FACES—II)
30. Family Crisis Oriented Personal Evaluation Scales (F-COPES)

Appendix D
Technical Advisory Committee and Other Reviewers of the CAPF Item Pool

Technical Advisory Committee

Ed De Vos, Boston Medical Center, MA School of Professional Psychology
Jackie Counts, University of Kansas
Tina Christie, UCLA

Quality Improvement Center on Early Childhood

Charlyn Harper Browne, CSSP
Judy Langford, CSSP
Teresa Raphael, National Alliance of Children's Trust and Prevention Funds
Nilofer Ahsan, CSSP
Melissa Brodowski, (ACH) HHS
Jodi Whiteman, Zero to Three
Nancy Seibel, Zero to Three
Martha Reeder, National Alliance of Children's Trust and Prevention Funds

Other Reviewers

Vonda Kiplinger, WindWalker Educational Consulting
Beverly Parsons, InSites

Appendix E
Instructions for Cognitive Testing of the CAPF and List of Questions for Focus Groups

Instructions for Cognitive Testing of the Caregivers' Assessment of Protective Factors

General

Date of Focus Group: _____

Location: _____

Introduce yourself (if necessary).

Thank the participants for helping us to test a new survey questionnaire that will be given of parents who participate in some of our programs. Put in your own words so that the statement is appropriate to your focus group.

Below is a model Script for the CAPF focus group. You do not have to read it verbatim – that would sound stilted and unnatural. The model is to be used only as a guide so that you gather all the requested information.

Script

I want you to know that I am not collecting data on you. I am collecting data on this new questionnaire to see if it has any items that are difficult to understand, hard to answer, or don't make any sense.

I also want to know if the way that we ask you to respond to the items makes sense.

Instead of asking questions, this survey questionnaire actually makes statements about the ways parents may feel or things parents may do. Then we ask the parents whether they

- *strongly disagree,*
- *disagree*
- *somewhat disagree*

- *somewhat agree*
- *agree or*
- *strongly agree*

with the statement.

Are there any questions? [Answer questions]

OK, are we ready to begin?

[Direct the participants to go to the first page of the questionnaire.]

First, I need to know whether the first section that asks for personal information is clear. Please complete the Participant Information section.

[Give the participants time to fill in this section.]

1. *Do you understand how to answer the questions by filling in the circles and boxes? If not, what is the problem?*

2. *Did you have any problem answering any of these questions? Please tell me which ones and why.*

3. *Next, I need to know whether the directions make sense and whether they are easy to follow. Please read the directions below the first section.*

[Give the participants time to read the directions, then ask:]

Do these directions make sense? Are they easy to follow? If not, why not?

4. *We want to know what you think most parents would feel about each statement on the survey.*

    1) *Do you see any problems with the item? Is it easy to respond to?*
    2) *Would the statement make sense to most parents?*
    3) *Are there any words in the statement that are hard to understand or are confusing?*
    4) *Does the wording in the statement have a different meaning for different cultures or ethnic groups?*
    5) *Is the statement hard to respond to?*
    6) *Would most parents have any difficulty choosing one of the response options, "Strongly Disagree, Disagree, Somewhat Disagree, Somewhat Agree, Agree, or Strongly Agree"?*

5. *Here is a list of the questions that I will be asking you about each item. If you think the item is OK and there is no problem, tell me and we will move on to the next one.*

[Give each participant the list of questions and say:]

6. *Let's go to item # 1.*

[Read each item.]

[Use your own method to take notes and you can use your own wording. **However, be sure to gather information on the questions below, as well noting any items that participants**:

- Ask you to repeat in part or in entirety;
- Ask you for clarification;
- Think should be deleted;
- Think they to need to clarify or qualify their response;
- Have difficulty using the response options.]

1) *Do you see any problem with this item? Is it easy to respond to? Is it easy to use the response choices?*

[If there is no problem at all, move on to the next item. Otherwise, find out:]

2) *Would the statement make sense to most parents?*

3) *Are there any words in the statement that are hard to understand or are confusing?*
   Probe:
   a. *What word(s) should be changed?*

4) *Does the wording in the statement have a different meaning for different cultures or ethnic groups?*
   Probes:
   a. *In what way?*
   b. *How should it be changed so that it means the same thing for everyone?*

5) *Is the statement hard to respond to?*
   Probes:
   a. *Why; in what way?*
   b. *How would you change the statement to make it easy to respond to?*

6) *Do you have any difficulty in using the response options with the statement? Would most parents have any difficulty choosing one of the response options "Strongly Disagree, Disagree, Somewhat Disagree, Somewhat Agree, Agree, or Strongly Agree"?*
   Probe:
   a. *Why?*

Take at least one break, possibly two, when participants start to appear fatigued.

At the conclusion of the focus group, thank the participants and give them their gift cards/cash. Follow your standard procedures for receipts.

HANDOUT

List of Questions for Focus Groups on the Caregivers' Assessment of Protective Factors May 2013

For each item we want to know the following:

1. Do you see any problem with this item? Is it easy to respond to?

2. Does the item make sense?

3. Is it hard to respond to the item?
    a. Why; in what way?
    b. How would you change the item to make it easy to respond to?

4. Do you have any trouble with the wording of the item?
    a. In what way?
    b. Is the wording on the item ambiguous?
    c. Is the wording on the item too complex?
    d. How should it be changed?

5. Does the wording on the item seem to convey any cultural or ethnic bias?
    a. In what way?
    b. How should it be changed so that it doesn't show bias?

6. Do you have any difficulty in using the response options with the item?
    a. If yes, why?

Appendix F
Demographic Characteristics of the MTurk Samples and the U.S. Population

Characteristics	Survelet 1 %	Surveylet 2 %	Surveylet 3 %	US Population[1] %
Gender				
Female	57	56	51	51
Male	43	44	49	49
Minority status				
White non-Hispanic	71	74	74	63
Minority	29	26	26	37
Country or origin				
USA	95	95	95	87
Other	5	5	5	13
English is main language[2]				
Yes	99	99	99	80
No	1	1	1	20
English is native language				
Yes	95	97	95	No information
No	5	3	5	
Education completed				
No formal schooling	0	0	1	<1
Elementary school	0	1	0	2
Middle school/junior high	0	0	<1	11
High school or GED	29	30	29	50
Trade or technical school	13	10	8	4
2-yr. college with AA degree	13	17	19	5
4-yr. college with BA/BS degree	32	33	32	18
Post graduate degree	12	10	10	10

[1]Source: 2010 United States Census.
[2]English is the language spoken at home.

Appendix G
Item Statistics, Group Differences and Local Dependence of the Pilot Test Items

Results of the exploratory factor analyses (EFA) of the pilot test data indicated a slightly different factor structure than originally hypothesized (via *a priori* constructs). Both the EFA and reliability analyses identified items that should be omitted from the subscales. Item statistics, group differences and local dependence estimates for the pilot test items are discussed below. These statistics are provided separately for the six constructs in Tables G-1 – G-6. This information was used to select items that appeared most related to the latent constructs of interest and that discriminated best between respondents who scored high or low on the pilot test measures. The tables list the items (by their item number in the surveylet on the pilot test); the factor loadings; Index of Discrimination (ID) values; the reliability coefficient (Cronbach's α) of the subscale if the item is deleted; indications of significant gender or race/ethnic differences; and other items that are highly correlated with the item (local dependence). This information is described below:

Factor Loadings

The factor loadings were produced by the exploratory factor analyses. They are the correlation of each variable and the factor. Higher loadings indicate that the items play a larger role in defining the factor than items with lower factor loadings.

Index of Discrimination

The correlation between the item and total score is regarded as an index of discrimination (ID) for polytomously scored items (items with more than two response options). The larger the ID, the better the item is at distinguishing between those who score high and those who score low on the subscale.

Reliability if Deleted

"Reliability if deleted" is the reliability coefficient (Cronbach's α, a measure of internal consistency) that would be obtained if the variable were deleted from the subscale. A value larger than the sub-scale's obtained reliability coefficient (α) indicates that reliability would increase if the item is deleted from the subscale. These items should be omitted. A value less than the obtained coefficient indicates that reliability would decrease if the item were deleted. These items should be retained for use in the field test instrument or as potential replacement items in the item pool.

Differential Item Functioning: Gender

Indication of significant differences in the pattern of responses between males and females is also provided in Tables G-1 – G-6. Although there was no reason to suspect gender bias in any of the items, differences in patterns of response between male and female caregivers were examined as a matter of course. Significant differences in the responses of males and females to several items in the pilot test were seen. In every case, however, the differences are consistent with the traditional role of the female as nurturers and caregivers who are more experienced and comfortable in that role and who are more comfortable seeking help for their children when needed. This contention is supported by the fact that the greatest number of significant differences were found in the subscales that measure parenting and nurturing beliefs and behaviors: Parental Resilience: Parenting Stress, Social and Emotional Competence of Children, and Knowledge of Parenting and Child Development. A few differences were also found in the Social Connections and Concrete Support in Times of Need subscales, all related to seeking assistance for their child or family. Therefore, it appears that the differences observed reflect real differences between the male and female respondents, rather than reflecting any gender bias in the items or the instrument.[15] Female/male differences are indicated in the tables as follows: F > M indicates that females are more likely to respond "Agree" or "Strongly Agree" than males and M > F means that males are more likely to respond "Agree" or "Strongly Agree" than females.

Differential Item Functioning: Race/Ethnicity

Observed significant differences between white, non-Hispanic respondents and minority respondents were also found. Again, we had no reason to suspect any cultural bias in the wording of the items, but differences in the responses of white, non-Hispanic and minority respondents were examined as a matter of course. Significant differences were found for only a handful of items[16]. White/minority differences are indicated in Tables G-1 – G-6 as follows: W > Min indicates that white, non-Hispanic respondents were more likely to respond "Agree" or "Strongly Agree" than minority respondents and Min > W means that minority respondents were more likely to respond "Agree" or "Strongly Agree" than white, non-Hispanic respondents.

Local Dependence

The last column in the tables lists items that were highly correlated with the item of interest. High inter-item correlation between pairs of items ($r \geq .60$) is termed "local dependence." Items that are highly correlated are highly related and may be measuring similar things. If an item is highly correlated with several other items, it can be omitted from the subscale without loss of information.

[15] Instrument bias occurs when a survey instrument is prejudiced or unfair to groups of people or individuals who are different from the majority of the test takers. Item bias is said to occur when some items in a test or survey instrument are found to function differently for a specific subgroup of the general group being tested, making a direct comparison of their responses to the items inappropriate.

[16] Cultural bias in a test or item occurs when there are established differences in responses in different populations which are more likely to reflect cultural differences than differences in the variable being measured.

Parental Resilience: General Life Resilience Subscale

Table G-1 presents the results for the items in the construct, Parental Resilience: General Life Resilience.

The EFA indicates that item 14, "I manage the stresses of being a parent," which was originally included in the Parenting Resilience subscale correlates more highly with the items in the General Life Resilience subscale. Therefore, it is included in the former subscale and its item statistics are shown in Table G-1.

The reliability analysis indicates that item 13, "Bad things in my childhood or teen years keep me from doing my best," would increase Cronbach's α from .896 to .906 if deleted from the subscale. This item also has the lowest factor loading and Index of Discrimination.

Table G-1. Parental Resilience: General Life Resilience Subscale (Cronbach's α = .896)

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
2. I stand up for myself when I need to.	.848	.707	.884			
1. I have a positive attitude about my life.	.799	.711	.883			
9. I do things to make my life better.	.793	.670	.886			
5. I have the strength within myself to solve problems that happen in my life.	.771	.661	.887			
7. I am NOT confident I can achieve my goals. (RC)[1]	.741	.653	.886			
6. I have goals for myself.	.714	.609	.888			
4. When a problem or crisis happens, I try to find a way to solve it.	.675	.626	.888			
3. I take care of my daily responsibilities even if problems get me down.	.619	.602	.889			
10. I believe that my life will get better even when bad things happen.	.549	.579	.889			

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
11. I take care of my daily responsibilities even when I am angry.	.502	.586	.889	F > M		
14. I manage stresses of being a parent.	.456	.646	.889			
8. I take care of my daily responsibilities even when I am sad.	.440	.471	.894			
12. I try to get help for myself when I need it.	.428	.511	.893			
13. Bad thinks in my childhood or teen years keep me from doing my best. (RC)[1]	.360	.380	.904			

[1]This item is negatively worded; therefore, the response values are reverse coded for analysis so that high values indicate more desirable responses (Strongly Disagree is recoded from 1 to 6; Disagree is recoded from 2 to 5; Somewhat Disagree is recoded from 3 to 4; Somewhat Agree is recoded from 4 to 3; Agree is recoded from 5 to 2; and Strongly Agree is recoded from 6 to 1.

Parental Resilience: Parenting Resilience Subscale

Table G-2 presents the results for the items in the construct, Parental Resilience: Parenting Resilience. Items 23 and 30 have the lowest factor loadings on this factor and demonstrate some of the lowest Index of Discrimination (ID) values. Items 15, 17, and 20 demonstrate high local dependence (inter-item correlations of 0.6 or greater), which means that these items are measuring similar things. This criterion can be used as a supporting reason for recommending items for deletion. Item 15 has a low factor loading, one of the lowest ID values and local dependence with three other variables.

Table G-2. Parental Resilience: Parenting Stress Subscale
(Cronbach's α = .913)

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
28. I am confident I can take good care of my child.	.841	.751	.906	F > M		
29. I have trouble maintaining self-control when my child misbehaves. (RC)[1]	.762	.669	.907		Min > W	
24. I enjoy being a parent even though it can be hard.	.760	.712	.906	F > M	W > Min	
25. I pay attention to my child when I am sad.	.743	.687	.907	F > M		
27. I cannot control myself when I get angry with my child. (RC)[1]	.735	.660	.907		Min > W	
20. I take good care of my child even when I am sad.	.728	.733	.906	F > M		15, 16, 17, 21, 25, 28
16. I make sure my child gets the attention he or she needs even when my life is stressful.	.666	.709	.906	F > M		
26. I feel negative about being a parent. (RC)[1]	.661	.576	.910	M > F		
22. I lose my patience when my child won't stop crying. (RC)[1]	.608	.461	.914			
17. I find ways to handle problems related to my child.	.599	.734	.906	F > M		15,16, 28,
21. I manage the daily responsibilities of being a parent.	.591	.675	.908	F > M		
18. My own problems keep me from taking good care of my child. (RC)[1]	.565	.548	.912	M > F		
19. I have a positive attitude about being a parent.	.552	.687	.907		W > Min	

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
15. I try to get help for my child when he or she needs it.	.528	.637	.909	F > M		16, 17, 20,
30. Bad things in my childhood or teen years keep me from doing my best as a parent. (RC)[1]	.410	.500	.913	M > F		
23. My parenting skills need to be improved. (RC)[1]	.379	.387	.919	F > M		

[1]This item is negatively worded; therefore, the response values are reverse coded for analysis so that high values indicate more desirable responses (Strongly Disagree is recoded from 1 to 6; Disagree is recoded from 2 to 5; Somewhat Disagree is recoded from 3 to 4; Somewhat Agree is recoded from 4 to 3; Agree is recoded from 5 to 2; and Strongly Agree is recoded from 6 to 1.

Social Connections Subscale

Table G-3 presents the item statistics for the Social Connections Subscale. These items were pilot tested along with items from the Concrete Support in Times of Need Subscale. The EFA indicate that five items from the *a priori* construct, Concrete Support in Time of Need, load higher on the Social Connections factor. The items are:

27. I ask for help when I cannot take care of my daily responsibilities.

31. Asking for help *for myself* is embarrassing.

33. Asking for help *for myself* is easy for me to do.

35. I am willing to seek help from by family.

36. I am willing to seek help from my friends.

It is likely that these items indeed are better measures of social connections than concrete support. All five items indicate a *willingness* to seek help, which implies stronger social connections.

Items 9 and 14 did not load on either of these two factors. Items 21, 26, 31, and 33 demonstrate low factor loadings, low ID values, and increases in reliability if they are deleted from the subscale. Items 15, 18, and 24 also have relatively low factor loadings. Items 1, 2, 3, 4, 5, 6, 12, and 20 are highly correlated with other items (local dependence) and could be omitted without loss of information.

Table G-3. Social Connections Subscale
(Cronbach's α = .966)

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
12. I have someone who will help me get through tough times.	.878	.833	.964			13,17,18,19, 20,22,23,24, 25,27,35
6. I have someone to talk to about important things.	.876	.841	.964			7,8,10,11, 12,13,16,17, 18,19,20,22, 23,27
3. I have someone who will encourage me when I need it.	.874	.832	.964			4,5,6,7,8,10, 11,12,13,17, 18,19,20,22, 23,24,25,27, 35
20. I have someone who can help me calm down if I get frustrated with my child.	.873	.844	.964			22,23,25,27
1. I have someone I can talk to about my feelings.	.853	.817	.965			2,3,4,5,6,7, 8,10,12,13, 17,19,20,22, 23,25,27,36
23. There are people in my life who encourage me.	.846	.803	.965			24,25,27,35
13. I have someone who helps me calm down when I get upset.	.838	.828	.964			17,28,19,20, 23,25,27
19. I have someone who can help me feel better when I am sad.	.818	.848	.964			20,22,23,24, 25,27
35. I am willing to seek help from my family.	.804	.712	.965			
17. I have someone who helps me feel good about myself.	.794	.730	.965			19,20,23,25
22. I do NOT have anyone I can ask for help when I need it. (RC)[1]	.792	.775	.965			23,25,27,35
2. I have someone I can go to for help if a crisis happens.	.789	.760	.965			3,4,5,6,8,12, 13,17,19,22, 23,35

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
5. I have someone who gives me helpful advice about parenting.	.785	.733	.965			6,10,11,12, 13,19,20,23, 27
16. If I need help getting what I need, I have someone who will assist me.	.768	.726	.965			20,22,23,27
27. I ask for help when I cannot take care of my daily responsibilities.	.764	.775	.965			
11. I have someone who will help me understand more about my child.	.764	.715	.965			12,13,17,20, 23,27
4. I have someone who I trust.	.761	.800	.965			5,6,8,12,13, 15,18,19,20, 21,22,23,27, 35
7. I feel isolated or alone. (RC)[1]	.743	.703	.965			13,19,20
10. I have someone who will tell me in a caring way if I need to be a better parent.	.734	.730	.965			11,12,13,16, 20,22,23
25. There are people in my life who appreciate me.	.732	.758	.956			
8. I have someone who really cares about me.	.710	.731	.965			12,13,18,19, 21,22,25
24. There are people in my life who respect me.	.677	.716	.965			
18. I have a close and caring relationship with at least one person.	.627	.712	.965			19,20,23,25
21. I have someone who helps me take care of my child.	.626	.649	.966			
36. I am willing to seek help from my friends.	.616	.633	.966			
15. If I need help getting what my child needs, I have someone who will assist me.	.551	.656	.965	F > M		16,22,23

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
31. Asking for help for myself is embarrassing. (RC)[1]	.461	.512	.967		W > Min	
33. Asking for help for myself is easy for me to do.	.432	.443	.967		Min > W	
26. Other people turn to me for help.	.362	.436	.967			
9. People I care about are very critical of me. (RC)[1]		.246	.969			
14. People I care about are negative about things I do as a parent. (RC)[1]		.299	.968			

[1]This item is negatively worded; therefore, the response values are reverse coded for analysis so that high values indicate more desirable responses (Strongly Disagree is recoded from 1 to 6; Disagree is recoded from 2 to 5; Somewhat Disagree is recoded from 3 to 4; Somewhat Agree is recoded from 4 to 3; Agree is recoded from 5 to 2; and Strongly Agree is recoded from 6 to 1.

Concrete Support in Times of Need Subscale

Table G-4 shows the item statistics for the Concrete Support in Times of Need Subscale. Item 42 does not load on the Concrete Support in Times of Need factor nor on the Social Connections factor and it has the lowest ID value. None of the items would increase Cronbach's α if deleted.

Table G-4. Concrete Support in Times of Need Subscale
(Cronbach's α = .860)

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
40. I do NOT give up when I run into problems trying to get the services my child needs.	.756	.595	.846			
44. I make an effort to get the services my child needs.	.735	.622	.845		W > Min	
43. I make an effort to learn about community resources for my child.	.678	.528	.850			
32. Asking for help for my child is embarrassing. (RC)[1]	.597	.518	.851	M > F		
38. When I cannot get help, I just give up. (RC)[1]	.589	.605	.845			
30. I know where to go if my child needs help.	.583	.625	.847			
37. I am willing to seek help from community programs or agencies.	.569	.504	.852			
34. Asking for help for my child is easy for me to do.	.510	.481	.854			
41. I make an effort to learn about community resources for myself.	.479	.462	.854			
39. I do NOT give up when I run into problems trying to get the services I need.	.426	.527	.850			
28. I know where to get help if I have trouble taking care of my family's basic needs, such as trouble providing food or housing for my family.	.392	.500	.852	F > M		

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
29. I know where to get help if I have trouble taking care of emergencies.	.366	.488	.852			
42. I make an effort to get the services I need for myself.		.445	.855			

[1]This item is negatively worded; therefore, the response values are reverse coded for analysis so that high values indicate more desirable responses (Strongly Disagree is recoded from 1 to 6; Disagree is recoded from 2 to 5; Somewhat Disagree is recoded from 3 to 4; Somewhat Agree is recoded from 4 to 3; Agree is recoded from 5 to 2; and Strongly Agree is recoded from 6 to 1.

Social and Emotional Competence of Children Subscale

Table G-5 presents the item statistics for the Social and Emotional Competence of Children Subscale. These items were pilot tested along with items from the Knowledge of Parenting and Child Development Subscale. The EFA indicates that seven items from the *a priori* construct, Knowledge of Parenting and Child Development, load higher on the Social and Emotional Competence of Children factor. The items are:

27. It is important to talk to infants when they babble.

31. Children should be praised when they do something well

33. I know what children are capable of doing at different ages.

35. I know what toys are appropriate for children at different ages.

36. I am sure of what to do to help children develop well.

39. I know where I can get helpful information about parenting and taking care of children.

40. I know where I can get helpful information about children's development at different ages.

Items 12 and 18 load on the Knowledge of Parenting and Child Development factor, as shown in Table G-6.

Table G-5. Social and Emotional Competence of Children Subscale
(Cronbach's α = .947)

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
35. I know what toys are appropriate for children at different ages.	.796	.535	.946			
36. I am sure of what to do to help children develop well.	.769	.532	.946			
16. I set an example of how to get along with other people.	.750	.678	.945			
26. I know what to do to help my child feel secure.	.731	.660	.945			
4. I am happy when I am with my child.	.723	.689	.945			5
17. I help my child learn to manage frustration.	.723	.546	.946			
8. I play with my child when we are together.	.673	.467	.947		Min > W	
33. I know what children are capable of doing at different ages.	.635	.501	.946	F > M		
25. I remain calm when my child misbehaves.	.631	.450	.947			
9. I respond quickly to my child's needs.	.615	.569	.946			
15. I explain things to my child, even if my child is too young to understand what I am saying.	.610	.626	.945			
3. I help my child learn to adjust to new things.	.605	.674	.945	F > M		4
39. I know where I can get helpful information about parenting and taking care of children.	.603	.551	.946	F > M		40
23. I can usually tell what my child is feeling.	.596	.571	.946	F > M		
5. I like being a parent.	.587	.645	.945			
40. I know where I can get helpful information about children's development at different ages.	.578	.618	.945	F > M		

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
7. I believe my child has a strong emotional connection with me.	.574	.589	.946	F > M		
13. I help my child calm down when he or she is upset.	.569	.612	.945	F > M		
20. I encourage my child when he or she behaves well.	.565	.666	.945	F > M		
10. I can tell how my child is feeling.	.560	.623	.945	F > M		
14. I talk to my child even if my child is too young to understand what I am saying.	.545	.657	.945			
2. I respond in a positive way to my child.	.541	.573	.946			3
21. I make sure my child feels safe when he or she is with me.	.521	.652	.945			22
1. I pay attention when my child babbles or talks.	.519	.535	.946	F > M		
27. It is important to talk to infants when they babble.	.514	.655	.945	F > M		
19. I encourage my child when he or she does something new.	.507	.978	.945	F > M		
31. Children should be praised when they do something well.	.495	.632	.945			
24. I show my child affection every day.	.493	.666	.945			
22. I try to make sure my child is in a safe environment	.447	.674	.945	F > M		24
11. I have regular routines with my child, such as putting him or her to sleep at night around the same...	.440	.432	.947			
6. I do NOT have a strong emotional connection with my child. (RC)[1]	.374	.507	.946	M > F		

[1]This item is negatively worded; therefore, the response values are reverse coded for analysis so that high values indicate more desirable responses (Strongly Disagree is recoded from 1 to 6; Disagree is recoded from 2 to 5; Somewhat Disagree is recoded from 3 to 4; Somewhat Agree is recoded from 4 to 3; Agree is recoded from 5 to 2; and Strongly Agree is recoded from 6 to 1.

Knowledge of Parenting and Child Development Subscale

Table G-6 provides the items statistics for the Knowledge of Parenting and Child Development Subscale. Items 27, 31, 33, 36, 39, and 40 from the original Knowledge of Parenting and Child Development construct load on the Social and Emotional Competence of Children factor. However, they also decrease the reliability of the Knowledge subscale if they are deleted.

Items 12 and 18 from the original Social and Emotional Competence Children construct load on the Knowledge of Parenting and Child Development factor, while items 29 and 42 do not load on either factor.

Table G-6. Knowledge of Parenting and Child Development Subscale (Cronbach's α = .836)

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
41. Caregivers should wait until young children are old enough to understand words before they start talking to them. (RC)[1]	.774	.562	.819	M > F	Min > W	
37. Holding infants a lot will spoil them. (RC)[1]	.752	.487	.825	M > F	Min > W	
38. Picking up infants when they cry will spoil them. (RC)[1]	.732	.554	.819	M > F	Min > W	
45. Infants do things just to make parents and caregivers angry. (RC)[1]	.602	.479	.825	M > F		
44. Having regular routines with children is NOT important. (RC)[1]	.547	.522	.822	M > F		
12. I spank my child when he or she misbehaves. (RC)[1]	.538	.313	.840			
18. It is hard for me to give affection to my child. (RC)[1]	.510	.582	.818			
30. It is okay to spank children when they misbehave. (RC)[7]	.484	.262	.832		Min > W	
32. Children should be encouraged to learn new things.	.436	.583	.825			

Item	Item Statistics			Significant Group Differences		High Inter-Item Correlation
	Factor Loadings	Index of Discrimination	α if Deleted	Gender	Race/ Ethnicity	
42. The way caregivers treat young children will influence how they act as they get older.	.436	.433	.828			
28. It is important for caregivers to talk with children.	.422	.502	.826	F > M		
33. I know what children are capable of doing at different ages.		.337	.832	F > M		
35. I know what toys are appropriate for children at different ages.		.313	.834			
36. I am sure of what to do to help children develop well.		.319	.833			
39. I know where I can get helpful information about parenting and taking care of children.		.496	.825	F > M		
40. I know where I can get helpful information about children's development at different ages.		.601	.819	F > M		
29. It is okay to yell at children when they misbehave. (RC)[1]			.828			
43. Giving children a lot of attention will help them feel secure.			.819	F > M		

[1]This item is negatively worded; therefore, the response values are reverse coded for analysis so that high values indicate more desirable responses (Strongly Disagree is recoded from 1 to 6; Disagree is recoded from 2 to 5; Somewhat Disagree is recoded from 3 to 4; Somewhat Agree is recoded from 4 to 3; Agree is recoded from 5 to 2; and Strongly Agree is recoded from 6 to 1.

Appendix H
Recruitment Letter for the First Field Test of the CAPF

Center for the Study of Social Policy

strengthening families
A PROTECTIVE FACTORS FRAMEWORK

PARENTS AND CAREGIVERS WANTED!

The Center for the Study of Social Policy (CSSP) is developing a new assessment tool to measure **parents' perceptions of their strengths** and is looking for individuals to help test the technical adequacy and usefulness of the instrument.

Information provided by this new tool can be used in designing, implementing and monitoring effective service plans, as well as in evaluating the effectiveness of programs that aim to support parents in building their protective factors.

In order to field test this new instrument, **CSSP needs help in recruiting a minimum of 2,000 parents and other primary caregivers of young children**. We need volunteers:

- Who have at least one child **birth to 8 years old**
- Who are fathers, mothers or other primary caregivers
- From all age groups (teen parents to grandparents who are primary caregivers)
- From all racial and ethnic/cultural groups
- From all economic groups
- From all regions of the country

Although CSSP cannot offer compensation for completing the survey, volunteers will play a very important part in the development of a new instrument that assesses parents' perceptions of their strengths, unlike many other instruments that focus on parents' problems and what they may be doing wrong.

The survey takes roughly 20 minutes and can be accessed by clicking on or copying and pasting the following link: https://www.surveymonkey.com/s/VSLWS7R

Submissions must be completed by **January 5, 2014**.

All information and survey answers are anonymous and will be used for research purposes only.

Please distribute this message to individuals in your networks and ask them to encourage parents to complete the survey. Also, if you or members of your network meet the eligibility criteria or have family members who do, please complete the survey as well.

Appendix I
Item Statistics, Group Differences, and Local Dependence on the First Field Test

Results of the exploratory factor analyses (EFA) and reliability analyses, as well as results from other item analyses in the first field test, informed recommendations for selection of items for the second field test instrument. Both the EFA and reliability analyses identified items that should be omitted from the subscales. These statistics are provided separately for the subscales in Tables I-1 – I-5. This information was used to select items that appeared most related to the latent constructs of interest and that discriminated best between respondents who scored high or low on the first field test measures. The tables present the items sorted by decreasing value of the factor loadings; their factor loadings; Index of Discrimination (ID); and reliability coefficient (α) of the subscale if the item is deleted. Use and interpretation of the factor loadings, Index of Discrimination, and reliability if deleted are discussed in Appendix G.

Social Connections Subscale

Table I-1 presents the results for the items in the Social Connections subscale. The ten items recommended for inclusion in the subscale are not highlighted. Items recommended for exclusion are "grayed out."

Table I-1. Social Connections Subscale
(Cronbach's α = .949)

Item	Item Statistics			Comments
	Factor Loadings	Index of Discrimination	α if Deleted	
28. I have someone who will encourage me when I need it.	.893	.807	.943	
15. I have someone who will help me get through tough times.	.851	.728	.945	
35. There are people in my life who encourage me.	.849	.806	.944	Redundant with # 28
34. I have someone who helps me calm down when I get upset.	.838	.789	.943	
61. If I need help getting what I need, I have someone who will help me.	.833	.845	.942	Redundant with # 43
43. I have someone I can ask for help when I need it.	.831	.812	.943	
29. I have someone who can help calm me down if I get frustrated with my child.	.829	.788	.944	
47. I have someone who helps me feel good about myself.	.805	.817	.943	
67. I have someone to talk to about important things.	.791	.780	.944	
79. I have someone who will tell me in a caring way if I need to be a better parent/caregiver.	.629	.708	.946	
48. I am willing to ask for help from my family.	.625	.649	.947	
66. I have someone who will help me understand more about my child.	.491	.656	.947	
49. I am willing to ask for help from my friends.	.456	.597	.949	Low factor loading & ID value
62. I ask for help when I cannot take care of my daily responsibilities.	.428	.620	.948	Low factor loading & ID value

Parental Resilience Subscale

Items in the original Parental Resilience construct were highly correlated. Indeed, the reliability analyses found substantial multicollinearity (local dependence) among these items, which indicates that one or more items are perfectly or highly correlated, or that one of the variables is a linear combination of other variables in the data set. These items must be excluded from the final subscale. They are indicated by the "graying out" in the table below.

Table I-2 presents the item statistics for the Parental Resilience Subscale. Five items that measure "general life resilience" and five items that measure "parenting resilience" were selected. The 10 items recommended for inclusion in the subscale are <u>not</u> highlighted. Items recommended for exclusion are "grayed out."

Table I-2. Parental Resilience
(Cronbach's α = .941)

Item	Item Statistics			Comments
	Factor Loadings	Index of Discrimination	α if Deleted	
82. I take care of my daily responsibilities even when I am sad.	.875	.699	.938	Determinant of covariance matrix is 0 or ~ 0; indicates that variable is highly correlated with other items & should be dropped.
59. I take care of my daily responsibilities even if problems make me sad.	.805	.667	.938	
60. I take care of my daily responsibilities even when I am angry.	.786	.667	.938	Determinant of covariance matrix is 0 or ~ 0; indicates that variable is highly correlated with other items & should be dropped.
37. I take good care of my child even when I am sad.	.703	.653	.938	
36. I pay attention to my child even when I am sad.	.628	.633	.938	Determinant of covariance matrix is 0 or ~ 0; indicates that variable is highly correlated with other items & should be dropped.
72. I take good care of my child even when I have personal problems.	.593	.674	.938	
81. I manage the daily responsibilities of being a parent/caregiver.	.579	.654	.938	
83. I manage the stress of being a parent/caregiver.	.571	.684	.938	Redundant with # 81

Item	Item Statistics			Comments
	Factor Loadings	Index of Discrimination	α if Deleted	
86. I have a positive attitude about being a parent/caregiver.	.536	.729	.937	Determinant of covariance matrix is 0 or ~ 0; indicates that variable is highly correlated with other items & should be dropped.
33. I have the strength within myself to solve problems that happen in my life.	.530	.670	.938	
39. I am confident I can achieve my goals.	.489	.641	.939	
64. I believe that my life will get better even when bad things happen.	.486	.626	.939	
65. I feel positive about being a parent/caregiver.	.486	.695	.938	
26. I stand up for myself when I need to.	.424	.485	.941	
87. I like being a parent/caregiver.	.412	.596	.939	Among lowest factor loadings; loads on SEC.
63. I find ways to handle problems related to my child.	.412	.649	.938	
52. When a problem or crisis happens, I try to find a way to solve it.	.401	.617	.939	Among lowest factor loadings.
10. I have a positive attitude about my life.	.401	.530	.940	Among lowest factor loadings.
38. I have goals for myself.	.396	.585	.939	Among lowest factor loadings.
16. I am confident I can take good care of my child.	.387	.607	.939	Among lowest factor loadings.
27. I enjoy being a parent/caregiver even though I know it can be hard.	.359	.571	.939	Among lowest factor loadings.
11. I do things to make my life better.	.346	.534	.940	Among lowest factor loadings.
73. I encourage my child when he or she behaves well.	.343	.484	.940	Among lowest factor loadings.
75. I can tell how my child is feeling.	.330	.538	.940	Among lowest factor loadings.
45. It is easy for me to give affection to my child.				Does not load on any factor.

Concrete Support in Times of Need Subscale

Table I-3 presents the item statistics for the Concrete Support in Times of Need Subscale. The 10 items recommended for inclusion in the subscale are not highlighted. Items recommended for exclusion are "grayed out."

Table I-3. Concrete Support in Times of Need Subscale
(Cronbach's α = .902)

Item	Item Statistics			Comments
	Factor Loadings	Index of Discrimination	α if Deleted	
25. I make an effort to learn about the resources in my community that might be helpful for me.	.710	.689	.890	
24. I make an effort to learn about the resources in my community that might be helpful for my child.	.564	.611	.894	
19. I don't give up when I run into problems trying to get the services I need.	.549	.651	.892	
54. I am willing to ask for help from community programs or agencies.	.533	.571	.898	
56. I know where I can get helpful information about parenting and taking care of children.	.531	.645	.893	
84. I try to get help for myself when I need it.	.512	.631	.894	
40. When I cannot get help right away, I don't give up until I get the help I need.	.474	.692	.891	
46. I know where to go if my child needs help.	.444	.691	.891	
57. Asking for help for my child is easy for me to do.	.443	.598	.895	
77. If I had trouble taking care of my family's basic needs, such as getting food or housing, I would know where to go for help.	.443	.560	.897	Redundant with # 78; low ID value.
18. I don't give up when I run into problems trying to get the services my child needs.	.440	.606	.895	Redundant with # 19; one of lowest factor loadings.
78. I know where to get help if I have trouble taking care of emergencies.	.384	.629	.893	
30. Asking for help for my child is NOT embarrassing.				Does not load on any factor.

Knowledge of Parenting and Child Development Subscale

Table I-4 presents the item statistics for the Knowledge of Parenting and Child Development Subscale. The 10 items recommended for inclusion in the subscale are not highlighted. Items recommended for exclusion are "grayed out."

Table I-4. Knowledge of Parenting and Child Development Subscale (Cronbach's α = .859)

Item	Item Statistics			Comments
	Factor Loadings	Index of Discrimination	α if Deleted	
76. I talk to my child even if my child is too young to understand what I am saying.	.692	.604	.847	Redundant with # 74 & # 13; not stated as general knowledge.
74. It is important for parents/ caregivers to talk to children.	.640	.541	.852	
13. Parents/caregivers should talk to young children even if they are too young to understand.	.612	.490	.851	Redundant with # 13; low ID value.
69. The way parents/caregivers treat children when they are young will influence how children act as they get older.	.583	.525	.851	
55. I explain things to my child, even if my child is too young to understand what I am saying.	.573	.529	.849	Not stated as general knowledge; belongs in SEC.
53. Children should be encouraged to learn new things.	.539	.478	.854	
20. Holding infants a lot will NOT spoil them.	.506	.391	.863	
70. I know what children are able to do at different ages.	.448	.624	.843	
21. Picking up infants when they cry will NOT spoil them.	.438	.426	.859	
12. I know where I can get helpful information about children's development at different ages.	.427	.514	.850	
80. I know what toys are appropriate for children at different ages.	.382	.572	.846	
85. I know what to do to help children develop well.	.359	.631	.842	
51. I help my child learn to adjust to new things.	.326	.597	.845	

Item	Item Statistics			Comments
	Factor Loadings	Index of Discrimination	α if Deleted	
22. I know what to do to help my child feel safe and secure.	.323	.560	.848	Lowest factor loading.
23. I make an effort to get whatever services my child needs.				Does not load on any factor.
58. Having regular routines with children is important.				Does not load on any factor.

Social and Emotional Competence of Children Subscale

Table I-5 presents the item statistics for the Social and Emotional Competence of Children Subscale. This factor includes six items from the original Social and Emotional Competence of Children subscale and four items from the Parental Resilience subscale. The 10 items recommended for inclusion in the subscale are not highlighted. Items recommended for exclusion are "grayed out."

Table I-5. Social and Emotional Competence of Children Subscale (Cronbach's α = .914)

Item	Item Statistics			Comments
	Factor Loadings	Index of Discrimination	α if Deleted	
17. I maintain self-control when my child misbehaves.	.845	.661	.876	
50. I stay calm when my child misbehaves.	.835	.702	.872	
42. I can control myself when I get angry with my child.	.703	.625	.878	
71. I stay patient when my child cries.	.644	.645	.877	
32. I help my child learn to manage frustration.	.532	.658	.876	
31. I am happy when I am with my child.	.481	.571	.882	
68. I help my child calm down when he or she is upset.	.408	.638	.877	
41. I play with my child when we are together.	.397	.575	.882	
44. I make sure my child gets the attention he or she needs even when my life is stressful.	.340	.634	.877	
87. I like being a parent/caregiver.	.348	.560	.883	
14. I set an example for my child of how to get along with other people.				Does not load on any factor.

Appendix J
Recruitment Letter for the Second Field Test of the CAPF

This appendix provides the letter that was used to recruit volunteers for the second field test of the CAPF, presented on the following page.

Center for the Study of Social Policy

strengthening families
A PROTECTIVE FACTORS FRAMEWORK

PARENTS WANTED (version 2.0)!

The Center for the Study of Social Policy (CSSP) is in the **2nd phase** of testing a new tool to measure parents' perceptions of their strengths, and needs parents to take the **revised version of the survey**.

In this second phase of testing, **the focus is on recruiting parents who are served by or participate in various programs** and did not take the survey during the 1st phase.

We need parents:

- Who have at least one child (birth to 8 years old)
- Who are fathers, mothers or other primary caregivers
- From all age groups (teen parents to grandparents who are primary caregivers)
- From all racial and ethnic/cultural groups
- From all economic groups
- From all regions of the country

Although CSSP cannot offer compensation for completing the survey, volunteers will play a very important part in the development of a new instrument that assesses parents' perceptions of their strengths, unlike many other instruments that focus on parents' problems and what they may be doing wrong.

Information provided by this new tool can be used in designing, implementing and monitoring effective service plans, as well as in evaluating the effectiveness of programs that aim to support parents in building their protective factors.

The survey takes **less than 15 minutes** to complete and is available in two formats:

- The online version can be accessed by clicking on or copying and pasting the following link: https://www.surveymonkey.com/s/KHT82S5
- Hard copies can be obtained by contacting Charlyn Harper Browne: charlyn.harperbrowne@cssp.org

Surveys must be completed between **March 1 – March 31, 2014**.

All information and survey answers are anonymous and will be used for research purposes only.

Please distribute this message to individuals in your networks and ask them to encourage parents to complete the survey. Also, if you or members of your network meet the eligibility criteria or have family members who do—*and you did not take the survey during the 1st testing phase*—please complete the survey as well.

Thank you, in advance, for assisting CSSP in the development of a new parent tool.

Appendix K
Unstandardized Parameter Estimates for the Final First-Order CFA

			Estimate	S.E.	C.R.	P	Label
q44	<---	PR	1.000				
q42	<---	PR	.981	.042	23.441	***	par_1
q27	<---	PR	1.051	.049	21.537	***	par_2
q23	<---	PR	.977	.043	22.710	***	par_3
q55	<---	PR	.790	.034	23.288	***	par_4
q50	<---	PR	.862	.035	24.615	***	par_5
q43	<---	PR	.913	.037	24.375	***	par_6
q25	<---	PR	.911	.039	23.207	***	par_7
q9	<---	PR	.829	.037	22.661	***	par_8
q53	<---	SC	1.000				
q46	<---	SC	.890	.030	29.915	***	par_9
q35	<---	SC	.880	.037	23.527	***	par_10
q34	<---	SC	1.028	.034	30.450	***	par_11
q31	<---	SC	.961	.031	31.304	***	par_12
q24	<---	SC	.948	.030	31.298	***	par_13
q21	<---	SC	.978	.034	28.397	***	par_14
q20	<---	SC	1.024	.036	28.492	***	par_15
q12	<---	SC	.888	.031	28.440	***	par_16
q13	<---	SE	1.000				
q22	<---	SE	1.123	.048	23.172	***	par_17
q26	<---	SE	.704	.035	19.935	***	par_18
q29	<---	SE	.932	.045	20.805	***	par_19
q30	<---	SE	.989	.042	23.801	***	par_20
q32	<---	SE	1.062	.046	22.954	***	par_21
q36	<---	SE	1.118	.040	27.687	***	par_22
q47	<---	SE	.972	.042	23.329	***	par_23
q49	<---	SE	1.022	.048	21.382	***	par_24
q14	<---	CS	1.000				
q18	<---	CS	1.089	.053	20.649	***	par_25
q28	<---	CS	1.083	.040	27.146	***	par_26
q33	<---	CS	.996	.042	23.441	***	par_27
q39	<---	CS	1.044	.057	18.310	***	par_28
q40	<---	CS	.912	.042	21.804	***	par_29

			Estimate	S.E.	C.R.	P	Label
q41	<---	CS	1.037	.051	20.222	***	par_30
q52	<---	CS	.982	.045	22.012	***	par_31
q56	<---	CS	1.189	.056	21.268	***	par_32

Appendix L
Unstandardized Parameter Estimates for the Final Second-Order CFA

			Estimate	S.E.	C.R.	P	Label
SE	<---	PF	.392	.016	24.333	***	par_43
PR	<---	PF	.450	.017	26.740	***	par_44
CS	<---	PF	.447	.019	23.779	***	par_45
SC	<---	PF	.509	.021	23.670	***	par_46
q44	<---	PR	1.000				
q42	<---	PR	.976	.041	23.687	***	par_1
q27	<---	PR	1.051	.048	21.838	***	par_2
q23	<---	PR	.973	.042	22.951	***	par_3
q55	<---	PR	.782	.033	23.431	***	par_4
q50	<---	PR	.846	.034	24.601	***	par_5
q43	<---	PR	.906	.037	24.599	***	par_6
q25	<---	PR	.898	.039	23.266	***	par_7
q9	<---	PR	.818	.036	22.743	***	par_8
q53	<---	SC	1.000				
q46	<---	SC	.893	.030	29.759	***	par_9
q35	<---	SC	.883	.038	23.450	***	par_10
q34	<---	SC	1.032	.034	30.303	***	par_11
q31	<---	SC	.964	.031	31.111	***	par_12
q24	<---	SC	.953	.031	31.150	***	par_13
q21	<---	SC	.982	.035	28.280	***	par_14
q20	<---	SC	1.028	.036	28.359	***	par_15
q12	<---	SC	.894	.031	28.378	***	par_16
q13	<---	SE	1.000				
q22	<---	SE	1.125	.048	23.344	***	par_17
q26	<---	SE	.697	.035	19.881	***	par_18
q29	<---	SE	.925	.044	20.812	***	par_19
q30	<---	SE	.987	.041	23.858	***	par_20
q32	<---	SE	1.056	.046	23.003	***	par_21
q36	<---	SE	1.114	.040	27.744	***	par_22
q47	<---	SE	.964	.041	23.340	***	par_23
q49	<---	SE	1.018	.047	21.454	***	par_24
q14	<---	CS	1.000				
q18	<---	CS	1.076	.052	20.540	***	par_25
q28	<---	CS	1.082	.040	27.147	***	par_26

			Estimate	S.E.	C.R.	P	Label
q33	<---	CS	1.000	.042	23.588	***	par_27
q39	<---	CS	1.006	.057	17.747	***	par_28
q40	<---	CS	.909	.042	21.810	***	par_29
q41	<---	CS	1.030	.051	20.174	***	par_30
q52	<---	CS	.973	.044	21.907	***	par_31
q56	<---	CS	1.169	.056	21.034	***	par_32