# THEORIZING ABOUT RESILIENCE AND ITS RELATIONSHIP TO DEPRESSION AMONG RURAL LOW-INCOME MOTHERS: MIXED METHODS APPROACHES

By

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ABSTRACT

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Depression is a devastating disease, especially when the depressed individual is a mother. Research interest in maternal depression is justified when considering the far-reaching consequences experienced by children and families when mothers suffer from depressive symptoms. A contextual understanding of maternal depression is needed and can emerge when looking longitudinally at patterns of depression and their influences on personal and family life contexts. This dissertation consists of two studies, each of which used a longitudinal, mixed methods approach to explore the variability in longitudinal depression patterns among rural low-income mothers. Ecological and resilience approaches provided the theoretical frameworks to better understand risk and protective factors associated with each depression pattern.

In the first study, a resilience lens was employed to identify resilience processes adapted by the mothers and their families. Consistent with a concurrent triangulation design, quantitative analyses were conducted to place mothers within longitudinal depression patterns for subsequent in-depth analysis using grounded theory techniques. Similar themes emerged among all of the participants in the study. However, the *picture* of resilience expressed within these themes varied by depression pattern, as did the nature and the number of sources of stress and sources of strength.

In the second study, MANOVA and MANCOVA procedures provided insight into how the risk and protective factors organized themselves amid the depression patterns. Mothers in the high, worsening, and erratic patterns experienced more health problems, child health

problems, financial strain and food insecurity. Mothers in the low and improving patterns experienced fewer risk factors, and reported a higher sense of parental confidence and social support. Qualitative analyses provided further explanation and support for the quantitative findings, and provided further insight into the relationships among the risk factors and the interactive ways the mothers tapped into protective factors.

The findings of the two studies highlight the complexity of risk and resilience processes in the context of maternal depression among rural low-income women. For mothers with persistently high or worsening depression, multiple risk factors were associated, such as health problems, financial strain, and food insecurity. Despite such risks, important protective processes, or sources of strength, made a difference in the lives of the mothers and included a positive perspective, parenting strengths, social support, and perceived family strengths. Implications for research, policy and practice are discussed.

## DEDICATION

This dissertation is dedicated to my husband, my children, and many other family members and friends who supported me. This journey to research and write this dissertation can be likened to running a marathon. The race was long and full of unexpected twists, turns, road blocks, and life and family hurdles. However my husband, Bryan, was my rock at those times when I didn't think I could finish. His belief in me is unfathomable. My children, Corey, Sydney, and Max, have been incredibly patient through it all. My biggest prayer is for their resilience after the life and health battles that each of them, and our family has faced.

Before her illnesses, my mother was a huge resource when my children were smaller. She watched and loved them when I needed to focus on research. I could not have done all this without her and am so glad that God kept her with us after everything she has been through. I also cannot thank my father, and my mother and father-in-law enough for the ways they have supported my family and me through very difficult times. There were many other family members and friends who encouraged me along the way. Their cheering along the sidelines was a lifeline of motivation throughout the marathon.

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# CHAPTER 1
# INTRODUCTION

## Background

Social science has increasingly focused on the correlates and detrimental effects of depression in mothers. Such interest is justified when considering the far-reaching consequences experienced by children and families when mothers suffer from depressive symptoms. The child development literature alone has produced numerous studies on the relationship between maternal depression and poor child outcomes, such as poor child health (Casey, Goolsby, Berkowitz, Frank et. al, 2004), child disruptive behaviors (Gross, Shaw, Burwell & Nagin, 2009), and deficits in cognition and behavioral regulation among infants and young children (for a more extensive review see Hammen, 2003).

Studies of low-income mothers have identified risk factors associated with depression among this population, including financial stress and strain (Casey, Goolsby, Berkowitz, Frank, et. al, 2004). Rural mothers in particular experience life demands that have been found to be associated with depression symptoms, such as employment instability (Dolan, Richards, Sano, Bauer, & Braun, 2005; and Kim, Seiling, Stafford & Richards, 2005), and household food insecurity (Olson, Anderson, Kiss, Lawrence, & Seiling, 2004). Other challenges rural low income mothers and families face include isolation, limited employment and educational opportunities, and limited childcare options (Ames, Brosi & Damiano-Teixeira, 2006).

Most of the literature to date has examined maternal depression from a risk-only perspective. However, a risk and resilience perspective helps the field understand why some women, under similar risk conditions, do not experience depression. A risk and resilience lens would include examination of the buffers and coping mechanisms mothers and their families develop to off-set the demands related to mothers' depressive symptoms. A few studies that

have operationalized a resilience approach have identified social support as a coping mechanism some mothers employ in response to stressors (Brown, Brody & Stoneman, 2000; Casey, et.al., 2004; Coiro, 2001; Dennis, Parke, Coltrane, Blacher, & Borthwick-Duffy, 2003; Ennis, Hobfall & Schroder, 2000; Jackson, 1998, 1999; Jackson & Huang, 1998; Ross, 2000; Siefert, Heflin, Corcoran, & Williams, D. 2004; Taylor, Rodriguez, Seaton, & Dominguez, 2004). The present studies continue previous work analyzing data from a multi-state sample of rural low income women, and utilize a risk and resilience lens to glean an understanding of the interplay between mothers' depression patterns, life stressors, and individual and family protective factors and coping processes (i.e., individual and family resilience).

Until recently, the majority of the research on maternal depression has been cross-sectional and quantitative in design. Consequently, less is known about the variability of depression symptoms in community samples of mothers over time, and about the meanings and internal relationship dynamics families develop when mothers experience depression on a long-term basis. While more recent research has incorporated a longitudinal approach to understand the interactions between mothers' depression patterns, family dynamics and child outcomes (Gross, Shaw, Burwell & Nagin, 2009; Smith & Howard, 2008), they are still based mainly on quantitative analyses, which may miss other important factors that contribute to the complex interplay among individual and family risk and protective processes.

## Purpose Statement

The overall purpose of these exploratory studies is two-fold: to explore qualitatively and quantitatively the nature of rural low-income mothers' longitudinal depression patterns; and to build upon a risk and resilience theoretical framework. This dissertation uses data from the NC1011 Rural Families Speak project, a longitudinal, mixed method, multistate investigation of

the well-being of rural low-income mothers and their families in the context of welfare reform. Longitudinal depression patterns have been identified in the Rural Families Speak quantitative data set, but have not been formally investigated. The present studies explore the contextual nature of the depression patterns, and explore the distribution of risk and resilience factors among the patterns. The results of these explorations have implications for furthering our understanding of resilience frameworks.

## Statement of the Problem

The negative effects of poverty and rural living on maternal mental health and family functioning are important concerns for family professionals and policymakers. Rural working poor families have multiple challenges, and the requirements of welfare reform laws may further complicate rural life. It is imperative, therefore, to gain a better understanding of how rural working poor individuals and families cope with life challenges. While many studies have focused on the risks associated with rural poverty (Ames, Brosi & Damiano-Teixeira, 2006; Kim, Geistfeld & Seiling, 2003; Kim, Seiling, Stafford & Richards, 2005; Olson & Bove, 2005; USDA, 2002; see also the Rural Families Speak web site, http://fsos.che.umn.edu/projects/rfs.html), fewer have focused on individual and family resilience factors and processes associated with rural family life (Parra-Cardona, Bulock, Imig, Villarruel & Gold, 2006; Vandergriff-Avery, Anderson & Braun, 2004). A risk and resilience perspective provides practitioners and policy stakeholders with another lens to learn about the mechanisms by which many rural mothers and their families who have experienced depression have been able to maintain competent functioning in an uncertain time of welfare reform and economic change.

## Significance of the Study

Many studies focus on maternal depression either as a response to stressors, such as economic hardships and strains (Mirowsky & Ross, 1990; Pearlin, Menaghan, Lieberman, & Mullan, 1981; Pearlin & Schooler, 1978; Ross & Mirowsky, 1989; Turner & Lloyd, 1999a, 1999b), or as a risk factor for negative child outcomes (Brown, Brody & Stoneman, 2000; Casey, Goolsby, Berkowitz, Frank, Cook, Cutts, et. al., 2004; Dennis, Parke, Coltrane, Blacher, & Borthwick-Duffy, 2003; Hammen, 2003; Hammen & Brennan, 2003; Jackson, 1998; Luthar, D'Avanzo & Hites, 2003). Additionally, many studies are cross-sectional in nature (Brown, Brody & Stoneman, 2000; and Casey, Goolsby, Berkowitz, Frank, Cook, Cutts, et.al, 2004), which provides a snapshot of maternal depression. There are fewer longitudinal studies that focus on factors related to changes or improvements in mothers' depression over time (Avison, Ali, & Walters, 2007; and Moen, Robison & Dempster-McClain, 1995).

While the link between lower socioeconomic status and maternal depression has been made clear in the literature, the causal direction is more difficult to determine. Longitudinal quantitative studies aiming to untangle the causal relationship suggest that social causation models are supported in the data available (Eaton, Muntaner, Bovasso & Smith, 2001; Monroe, Slavich & Georgiades, 2009; Simmons, Braun, Charnigo, Havens & Wright, 2007). That is, social conditions such as chronic poverty, limited access to resources and supports, and family and life stressors place individuals at higher risk for health and mental health struggles (Simmons, Braun, Charnigo, Havens & Wright, 2007). Much has been learned about maternal depression from quantitatively based studies. However, given the complex nature of maternal depression and its relationship to healthy family functioning, the present studies use a

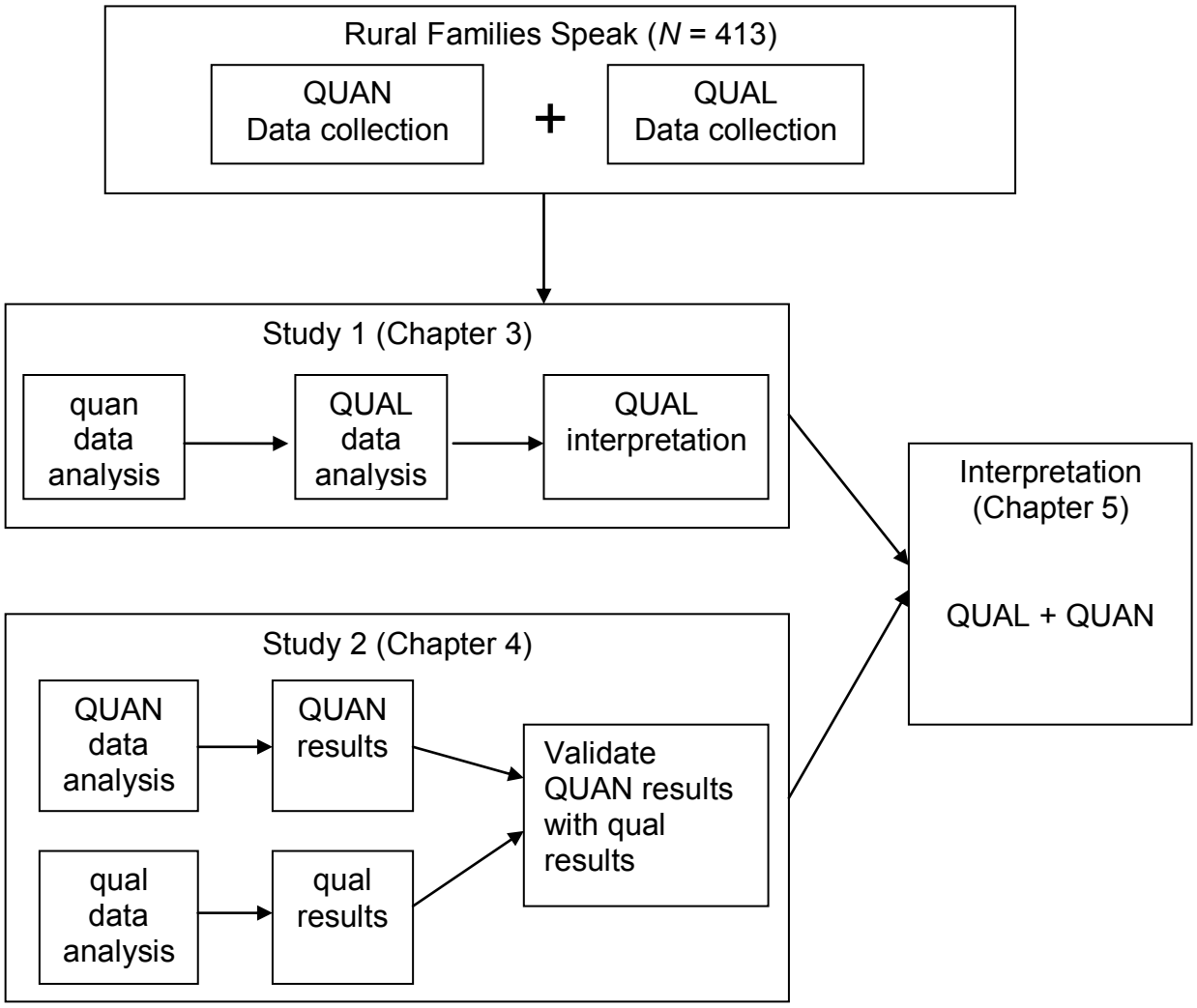
longitudinal mixed methods design to gain a better understanding of the relationship and functioning dynamics of depression and its influence on the family.

## Study Design

The specific mixed methods design of the larger Rural Families Speak project is consistent with a concurrent triangulation design (Creswell & Plano Clark, 2007; Creswell, Plano Clark, Gutmann, & Hanson, 2003) in which the quantitative and qualitative data were collected each year (for three waves of data collection), but the two data sets are kept separate so that members of the multi-state research team are able to analyze either or both of the data sets according to their research questions.

This dissertation consists of two mixed methods studies. Both also are consistent with a concurrent triangulation design (Creswell & Plano Clark, 2007; Creswell, Plano Clark, Gutmann, & Hanson, 2003) as described above; however integration occurs at different stages in each study. In the first study, integration of methods occurs at the analysis stage in that the quantitative data are used to divide mothers according to longitudinal depression patterns for qualitative analyses (described as chapter three below) and interpretation. In the second study (described as chapter four below) integration occurs at the interpretation stage in which "statistical trends are supported by qualitative themes" (Creswell, Plano Clark, Gutmann, & Hanson, 2003, p. 233). Findings from both studies are further integrated and discussed in chapter five. Figure 1.1 provides a visual representation of the relationships between the Rural Families Speak design, and the designs of the two studies in this dissertation.

Figure 1.1. Mixed Methods Designs of Rural Families Speak and this Dissertation




*Note:* QUAL = qualitative; QUAN = qualitative. Upper case letters denote primary method for a study. (+) indicates methods that occur at the same time; (→) indicates methods that occur in a sequence (Creswell & Plano Clark, 2007).

**Dissertation Structure**

The following outlines the structure of this dissertation:

Chapter one establishes the purpose and significance of this dissertation, providing an overview of maternal depression, and an overview of the theoretical frameworks informing the

studies. The structure of the mixed methods design for the dissertation and for each study is introduced.

Chapter two consists of an in-depth discussion of the ecological and risk and resilience frameworks, as they provide the theoretical framework for the study, as well as a comprehensive literature review of maternal depression.

Chapter three consists of the first manuscript (study 1), a mixed methods longitudinal study examining a sample of mothers who participated in all three waves of data collection. The purpose of this study is to glean an understanding of the contextual influences on mothers' depression patterns over time.

Maternal depression was measured using the Center for Epidemiologic Studies Depression Scale (CES-D), which was designed to measure symptoms of depression in the general public (Radloff, 1977). Analysis was conducted in three steps. First, using the quantitative data set, the mothers' depression scores were coded into four categories according to Seligman's recommendation (1998):

1) nondepressed (depression score of 0-9)

2) mildly depressed (depression score of 10-15)

3) moderately depressed (depression score of 16-24)

4) severely depressed (depression score over 24)

This categorization was used for the depression scores for each wave. This allowed a direct comparison of the levels of depression across all three years. For the second step, each mother was placed into one of six longitudinal "depression patterns":

- "Stable low" pattern consisted of mothers who reported depressive symptoms consistent with categories one and two (nondepressed and mildly depressed), and who remained in

those low categories across time (low → low → low).

- "Stable moderate" pattern consisted of mothers who reported depressive symptoms in the moderately depressed range over time (mod → mod → mod).
- "High depression" pattern consisted of mothers whose depression remained in the severely depressed category all three waves (high → high → high).
- "Worsening depression" consisted of mothers experiencing few depressive symptoms during the first wave, but more severe depressive symptoms over the next two waves (low → high → high).
- "Improving depression" consisted of mothers who experienced high depression the first wave, but reported fewer symptoms by the third wave (high → low → low).
- Finally, for some mothers the pattern was "erratic", such that symptom levels changed dramatically each year of data collection (very high → very low → very high).

The third step involved qualitative analysis of three cases from each of the depression patterns (18 cases total). For each case, the mothers' transcripts for all three years were analyzed. Thus a total of 54 transcripts were coded and analyzed (three mothers X six depression patterns X three transcripts). The objective of the qualitative analysis is to employ a grounded theory approach (LaRossa, 2005) to gain an understanding of the context in which these patterns occur, and the ways in which those patterns relate to family relationships, functioning, and meanings, as well as risk and resilience processes.

Chapter four consists of the second manuscript (study 2), an exploratory mixed method study in which the sample was divided according to the depression patterns described above, and bivariate analyses were conducted to understand the ways in which risk and resilience factors

organized themselves among each pattern of depression. These results were compared to analyses of risk and resilience factors that were relevant for the entire Rural Families Speak sample ($N = 413$). For instance, in previous research (Bulock, 2004) household income, life satisfaction, and social support were factors associated with depression among the entire sample. However mothers' employment status was a mediating variable. It was hypothesized that conducting analyses that took mothers' depression patterns into account would shed light on contexts and processes involved with depression patterns that are missed when analyses are conducted with an aggregated sample. Qualitative thematic analyses of the mothers' stories were then employed to support the quantitative results.

Chapter five integrates results from both studies and discusses the relevance to the literature on maternal depression, and contributions toward ecological and resilience frameworks. Important to this chapter will be discussion and implications for practice, research and policy.

**Dissertation Sample**

The sample for the dissertation is limited to mothers who participated in all three waves of data collection (N = 223) in order to categorize mothers according to their depression patterns (explained in the previous section). Table 1.1 provides demographic information about this sample, with the demographic information distributed by depression pattern.

Table 1.1. Demographic Variables Characterized by Rural Mothers' Depression Patterns

| | Low<br>*n* = 75<br>*% (n)* | Moderate<br>*n* = 25<br>*% (n)* | High<br>*n* = 14<br>*% (n)* | Improving<br>*n* = 48<br>*% (n)* | Worsening<br>*n* = 34<br>*% (n)* | H-L-H<br>*n* = 27<br>*% (n)* |
|---|---|---|---|---|---|---|
| Age<br>*M (SD)* | 31.2 (8.2) | 29.1 (6.8) | 31.6 (7.4) | 29.6 (7.0) | 30.2 (7.0) | 32.6 (7.1) |
| Education | | | | | | |
| High school & less | 30.6 (22) | 9.7 (7) | 6.9 (5) | 26.4 (19) | 16.7 (12) | 9.7 (7) |
| More than high school | 34.0 (48) | 12.1 (17) | 5.7 (8) | 19.9 (28) | 15.6 (22) | 12.8 (18) |
| Ethnicity | | | | | | |
| White | 30.7 (47) | 10.5 (16) | 7.8 (12) | 20.9 (32) | 16.3 (25) | 13.7 (21) |
| Hispanic/Latino | 40.6 (13) | 12.5 (4) | 0 | 21.9 (7) | 15.6 (5) | 9.4 (3) |
| African American | 33.3 (5) | 26.7 (4) | 0 | 26.7 (4) | 6.7 (1) | 6.7 (1) |
| Other | 40.0 (6) | 0 | 6.7 (1) | 33.3 (5) | 20.0 (3) | 0 |
| Marital status | | | | | | |
| Single | 31.5 (17) | 11.1 (6) | 7.4 (4) | 20.4 (11) | 16.7 (9) | 13.0 (7) |
| Married | 39.0 (32) | 7.3 (6) | 4.9 (4) | 23.2 (19) | 12.2 (10) | 13.4 (11) |
| Living w/partner | 22.9 (8) | 17.1 (6) | 5.7 (2) | 34.3 (12) | 14.3 (5) | 5.7 (2) |
| Divorced | 31.0 (9) | 13.8 (4) | 6.9 (2) | 17.2 (5) | 17.2 (5) | 13.8 (4) |
| Separated | 33.3 (5) | 13.3 (2) | 6.7 (1) | 6.7 (1) | 33.3 (5) | 6.7 (1) |

For qualitative analyses, three cases from each depression pattern were selected (n = 18 cases total). In order to maximize understanding of the differences and nuances of each pattern, extreme cases from each pattern were selected. Thus for each pattern, cases were selected based on extreme depression score values. For example, mothers with consistently lowest depression scores were selected for the low depression pattern. Likewise, mothers with the consistently highest depression scores were selected for the high depression pattern. For the improving, worsening and erratic patterns, mothers were selected for the extreme differences between depression scores across all three waves, according to their pattern. In addition, where possible,

cases were selected from different states for each pattern to vary location. The worsening depression pattern is the only pattern in which more than one case was from the same state. Table 1.2 presents the sample for qualitative analyses and lists the states included in each pattern, as well as mothers' marital status, age and depression scores for all three waves.

Table 1.2. Sample for Each Depression Pattern

| Depression Pattern/State | Pseudonym | Marital Status | Age | Depression Scores | | |
|---|---|---|---|---|---|---|
| | | | | Wave 1 | Wave 2 | Wave 3 |
| **Low** | | | | | | |
| • MA | Joelle | Divorced | 37 | 2 | 4 | 8 |
| • NE | Reba | Married | 34 | 4 | 2 | 1 |
| • OH | Jillian | Married | 40 | 4 | 6 | 5 |
| **Moderate** | | | | | | |
| • IN | Louanne | Single | 22 | 23 | 21 | 19 |
| • MI | Tomasa | Married | 32 | 24 | 16 | 20 |
| • OH | Becca | Married | 23 | 16 | 14 | 15 |
| **High** | | | | | | |
| • MD | Nan | Single | 42 | 48 | 42 | 45 |
| • NH | Jade | Divorced | 33 | 42 | 56 | 38 |
| • NY | Zola | Living with partner | 45 | 34 | 52 | 41 |
| **Improving** | | | | | | |
| • KY | Kami | Married/divorced | 35 | 51 | 13 | 3 |
| • LA | Shakira | Separated | 47 | 34 | 15 | 7 |
| • MN | Gabby | Divorced/married | 38 | 53 | 3 | 2 |
| **Worsening** | | | | | | |
| • MN | Trinity | Single | 39 | 11 | 37 | 34 |
| • MN | Mercy | Single | 27 | 7 | 15 | 28 |
| • NY | Soliel | Married | 29 | 3 | 33 | 44 |
| **Erratic** | | | | | | |
| • CA | Sancha | Single | 26 | 37 | 12 | 43 |
| • MD | Abiona | Single | 34 | 26 | 11 | 46 |
| • NY | Steph | Married | 49 | 20 | 10 | 51 |

*Where two marital statuses are indicated, the first is status at wave one, the second indicates change in status in wave two or three.

## Rural Families Speak Findings Related To Depression

These studies use data from the Rural Families Speak project, a multidisciplinary, mixed methods, longitudinal approach to developing an understanding of the challenges and complexities faced by rural low-income families within the context of their communities (see Bauer, 2004) Rural families struggle with limited employment opportunities and therefore higher poverty rates, limited educational and training opportunities, and difficulty maintaining dependable, affordable childcare and transportation (Bauer, Braun, & Dyk, 2003; and Findeis, Henry, Hirschl, Lewis, Ortega-Sanchez, Peine, & Zimmerman, 2001). Many of the studies stemming from the Rural Families Speak project have focused on factors related to the mental health of rural mothers in the sample, with depression being one of the most used indicators of maternal mental health. Though the studies are varied in design and methods, with some using a single wave of data for analyses and others using longitudinal designs, common themes have emerged in relation to maternal depression:

1). Participants' perceptions of life satisfaction and confidence in parenting ability (Bulock, 2004), and social support (Bulock, 2004, 2007; Islam, 2004; Garrison, Marks, Lawrence & Braun, 2004; and Kim, Seiling, Stafford & Richards, 2005) are associated with lower depression.

2). Food insecurity (Bulock, 2007; Olson, Anderson, Kiss, Lawrence, & Seiling, 2004; and Olson, 2006), and perceived economic strain (Bulock, 2007; and Dolan, Richards, Sano, Bauer, & Braun, 2005) are associated with higher depression.

3). Employment status, especially continued employment status over time, is related to lower depression (Dolan, Richards, Sano, Bauer, & Braun, 2005; and Kim, Seiling, Stafford & Richards, 2005).

4). The relationship between low income and depression is mediated by mothers' perceived economic strain. That is, annual income was related to higher depression when mothers perceived they were under economic strain (Bulock, 2007).

5). Stronger religious beliefs and faith community involvement is associated with lower depression (Garrison, Marks, Lawrence & Braun, 2004).

All of the studies cited above employed statistical techniques that used aggregated means, correlations, and covariances to develop quantitative analytical models of risk and protective factors. However, the stories and voices of the individuals tend to become lost in those aggregated data. The studies in this dissertation further pursue these data at the individual and group level to explore patterns of change in depression over time in order to understand life circumstances that may be associated with the differential depression patterns. Also, from a resilience perspective, it would be useful to understand the underlying meanings and experiences of these rural mothers, and why some of the mothers' depressive symptoms improved, why some worsened, and why some mothers' symptom patterns were erratic. Therefore, another aim of this dissertation was to gain an understanding of the context in which these patterns occur. To that aim, a mixed method approach was utilized to include both qualitative and quantitative analyses of rural mothers who participated in all three waves of data collection.

To date there are few studies that have tested longitudinal depression trajectories in mothers (Smith & Howard, 2008; and Gross, Shaw, Burwell & Nagin, 2009). However, those data were aggregated for quantitative, structural analyses only, such that individual change patterns may have been missed. The studies in this dissertation present a unique contribution to the literature in that they employ mixed methods approaches to explore those patterns both

qualitatively and quantitatively in order to gain a better understanding of the contextual forces influencing mother and family well-being within a community sample.

## Theoretical Frameworks

These studies employ the human ecological framework and resilience approach to studying individuals and families. Within the context of these studies, the human ecological approach provides a framework with which to view rural low-income individuals and family members as they interact within family subsystems, and with surrounding sociocultural systems, including work, health and social service agencies, and societal norms and expectations. Individuals and families are viewed as dynamic and adaptive to changes in internal and external environments with which they are interdependent (Bronfenbrenner, 1986). The ecological model also provides a lens for examining broader system influences on individual and family functions over time (Bubolz & Sontag, 1993). For instance, welfare reform and economic change, and limited employment and educational opportunities, coupled with stricter policies regarding employment and access to public assistance, can affect the extent to which workers are able to provide for the economic needs of their families. This can contribute to parental stress and affect mental health, which in turn, can affect family relationships and caregiving abilities.

Similar to the human ecological approach, the resilience approach focuses on adaptation to changes or stressors, within the family environment and in response to external environmental pressures. However, the resilience approach further provides a lens for viewing and understanding the capacities and resources, as well as the shared meanings and internal processes in which individuals and families engage in coping responses to stressors (Patterson, 2002). In other words, the resilience approach helps to understand *how* individuals and families adapt.

Currently individual and family resilience are seen as two separate frameworks with separate literature bases and lines of research, although family resilience researchers borrow concepts and constructs from individual resilience research. Consequently, resilience is inconsistently defined (Luthar, Cicchetti & Becker, 2000; Hawley & DeHaan, 1996; and Patterson, 2002a, 2002b) and the links between the two are unclear. Family resilience is a systems level theory, yet family systems are made up of individuals whose health, attitudes and development contribute to whole system functioning. It is hypothesized in this dissertation that adaptation and functioning (resilience) of rural working poor mothers contributes to adaptation and functioning (resilience) of the whole family system.

While family has been conceptualized as both a risk and protective factor influencing individual resilience (see several chapters of Luthar, 2003), less is known about the influence of the individual on family resilience (Hawley & DeHaan, 1996). In addition, studies of individual risk and resilience have focused on child and adolescent development (see several chapters of Luthar, 2003; Felsman, 1989; Clark & Clark, 2000), or on adult outcomes of childhood and adolescent risk experiences and resilience processes (Higgins, 1994; Rubin, 1996; Quinton, Rutter & Liddle, 1984). In order to make a better link between the two theories, it is important to understand how resilience takes shape within adults in families and how their resilience influences family level development. Therefore, these studies aim to bring these two lines of research together to begin building a more cohesive and comprehensive resilience framework. Given the pivotal role mothers play in families, it makes sense to begin linking individual and family resilience theories with a study of mothers and how their individual resilience relates to family resilience in this sample of rural low-income women.

The study conducted by Conger and Conger (2002) of Midwestern adolescents and their parents is an example of a study that brought the two lines of research together. Their research focused on resilience at the level of individuals (adolescents), dyadic pairs (marriage relationship, sibling subsystem, and the parent-child subsystem), and family. For their broad application of the construct, they adapted the broad definition of resilience proposed by Luthar, Cicchetti and Becker (2000) to conceptualize resilience at many levels: "Resilience refers to a dynamic process encompassing positive adaptation within the context of significant adversity." (p. 543). The same definition is adopted for the present studies. In addition to being applicable to resilience at multiple levels, this definition is important because it implies two conditions by which an individual or family could be deemed resilient: first, there has been exposure to significant adversity; and second, an achievement of positive adaptation, or competent functioning and development has been reached, despite the exposure to risk (Luthar, Cicchetti & Becker; Patterson, 2002a, 2002b; Hawley and DeHaan, 1996).

## Research Questions and Hypotheses

The following research questions and hypotheses were posed in order to gain a better understanding of the longitudinal patterns of depression among rural mothers, and how those patterns are linked to risk and resilience processes in rural mothers and their families.

Table 1.3. Research Questions and Hypotheses of the Dissertation and Studies

| | Research Questions | Hypotheses |
|---|---|---|
| Dissertation | 1. How can resilience at the individual and family levels be theoretically linked? | 1. Positive adaptation and functioning (resilience) of mothers is related to positive adaptation and functioning (resilience) of the whole family system. |
| | 2. What accounts for depression patterns among rural low-income women? | 2. Mothers with low, moderate and improving depression patterns will have fewer risk factors and more protective factors than mothers with high, worsening and erratic depression patterns. |
| Study 1 | 1. How is evidence of rural mothers' resilience related to evidence of resilience within their families? | Note: This study does not aim to test specific hypotheses. |
| | 2. How do mothers' perceptions, social supports, risks and the other contextual circumstances in rural mothers' lives differ when comparing mothers in each of the six depression categories? | |
| Study 2 | 1. Can Bronfenbrenner's Person-Process-Context-Time model be integrated with a resilience framework to explore the organization of risk and resilience factors amid longitudinal depression patterns? | 1. Mothers with low levels of depression across all three years will have fewer risk factors than mothers in the other depression patterns. |
| | 2. How do risk and protective factors organize themselves empirically amid depression patterns of low income rural mothers? | 2. Mothers whose depression was high all three years, or whose depression worsened over the course of the study, will have more risk factors than mothers in the other depression patterns. |

Table 1.3. (cont'd)

| | Research Questions | Hypotheses |
|---|---|---|
| Study 2 (cont'd) | 3. What circumstances or processes in rural mothers' lives are evident in the qualitative data that are not accounted for quantitatively to explain variability in the relationships between risk and protective factors and depression patterns? | 3. Food insecurity and a higher number of health problems will be risk factors for mothers in the high and worsening depression patterns.<br><br>4. The relationship between monthly income and depression will be mediated by mothers' perceptions of economic strain for the whole sample.<br><br>5. The relationship between mothers' sense of parental confidence and depression will be mediated by mothers' perceptions of parental social support for the whole sample. |

# CHAPTER 2
# LITERATURE REVIEW

## Introduction

By the year 2030 depression will rank second among the ten leading causes of death in the world, and it is projected that it will rank first for high income countries, such as the United States (Mathers & Loncar, 2006). Major depression is the leading cause of disability in the United States (US Department of Health and Human Services, 1999), and it is twice as common in women (Kessler et al., 2003), especially women of child-bearing ages (18-45 years old) (Substance Abuse and Mental Health Services Administration, 2010). Mothers with young children seem to be especially vulnerable to depression (Mistry, Stevens, Sareen, De Vogli & Halfon, 2007; Zuckerman & Beardslee, 1987).

Women play an important role in the nurturing and development of family members and the day-to-day management of family functioning. However, the capacity to carry out such roles is limited when women experience depression. The child development literature alone has produced numerous studies on the relationship between maternal depression and poor child outcomes, such as poor child health (Casey, Goolsby, Berkowitz, Frank et. al, 2004), mental health disorders (Hammen, 2009), child disruptive behaviors (Gross, Shaw, Burwell & Nagin, 2009; Turney, 2011; and Mustillo, Dorsey, Conover & Burns, 2011), and deficits in cognitive performance and dysfunctions in emotional and behavioral regulation among infants and young children (for a more extensive review see Hammen, 2003). The social sciences literature has increasingly focused on the correlates and detrimental effects of depression in mothers, as well as some of the processes by which maternal depression is related to family dynamics.

Most of the literature to date has examined maternal depression from a risk-only perspective. Less is known about resilience processes in mothers with depression and their families. Are there buffers that some mothers put in place to help them function during depressive episodes so they can carry out their mothering role? Do some of those buffers contribute to resilience processes within the families? Why do some mothers, under similar risk circumstances, experience very low levels of depressive symptoms? Ecological and risk and resilience lenses are needed in order to understand some of the factors and mechanisms that help some mothers and their families function well in the face of depression. From an ecological approach, individuals with depression and their families are dynamic and adaptive to changes within their family and in response to changes in external systems (Bronfenbrenner, 1986). The ecological model also provides a lens for examining contextual processes within families, and broader system influences on individual and family functions over time (Bubolz & Sontag, 1993). A risk and resilience approach provides a lens for viewing and understanding the capacities and resources of depressed individuals and their family, as well as the shared meanings and internal processes in which individuals and families engage as coping responses to depression related stressors (Patterson, 2002).

The overall purpose of these exploratory studies is two-fold: to explore the nature of rural low-income mothers' longitudinal depression patterns, and to build upon a risk and resilience theoretical framework. Because of the importance of theory to research, it is important to begin this review of the literature by providing the theoretical links between resilience and ecological approaches in order to lay a foundation for a unified framework on risk and resilience. The review will then provide a research backdrop for understanding what has been learned about depression, especially the research on factors that are associated with depression among mothers.

In addition, a review of studies from the Rural Families Speak project that relate specifically to depression among rural low-income families will be provided.

## Ecological and Resilience Frameworks

These studies employ resilience and human ecological approaches to studying individuals and families. Luthar, Cicchetti and Becker (2000) explain that much of the research on individual resilience has been guided by three theoretical frameworks: a "triarchic framework" (p. 552), ecological theory, and a structural-organizational framework. They also suggest that studies of resilience should employ theoretical frameworks relevant to "the particular adversity circumstance under study" (p. 553).

Therefore, a human ecological approach is connected to this review in two ways. First, following the suggestion by Luthar, Cicchetti and Becker above, a human ecological approach makes sense because it provides a contextual lens with which to view rural low-income individuals and family members as they interact within family subsystems, and with surrounding sociocultural exosystems, including extended family and friends, work, health and social service agencies, and societal norms and expectations. The ecological model also provides a lens for examining broader system influences on individual and family functions over time (Bubolz & Sontag, 1993). For instance, welfare reform and economic change, and limited employment and educational opportunities, coupled with stricter policies regarding employment and access to public assistance, can affect the extent to which workers are able to provide for the economic needs of their families. This can contribute to parental stress and affect mental health, which in turn, can affect family relationships and caregiving abilities.

Second, to this date research on resilience is categorized into two broad areas: individual resilience and family resilience. Family resilience has become a more widely used approach for

research and practice in family science over the past several decades, which has inspired much discussion in the field. Some of the discussion centers on the relationship between family resilience and resilience at the individual level. The two perspectives share much in common including similar definitions of resilience, similar foci on identifying processes which lead to competent outcomes, and agreement that resilience is intricately linked with development. Despite the commonalities, the two have not commonly been employed in the same study.

Theoretical discussions have provided definitions and described resilience as a construct and process (Hawley and DeHaan, 1996; Luthar, Cichetti and Becker, 2000; and Patterson, 2002a and 2002b; Ungar, 2010). More recent discussions connect a resilience theoretical framework with an ecological perspective in terms of considering contextual influences, both within the family and surrounding environments (e.g., see several chapters of Bevcar, 2013). This review uses Bronfenbrenner's Process-Person-Context-Time model (as discussed by Tudge, Mokrova, Hatfield & Karnik, 2009) as a structure with which to begin building a unifying resilience-ecological framework. The first step will be to tie resilience at the individual level with the human ecological perspective set forth by Bronfenbrenner (Bronfenbrenner, 1986, 1989, 1994, and as discussed by Tudge, Mokrova, Hatfield & Karnik, 2009). Much of Bronfenbrenner's writing on human ecology placed the developing individual as the center of focus. Thus it makes sense to connect Bronfenbrenner's key concepts and processes with concepts and processes discussed in the literature on individual resilience. Likewise, the following step will tie family resilience with the family ecological framework proposed by Bubolz and Sontag (1993). Table 1 below is a resilience concept matrix that places important components and processes of all four frameworks together for visual comparisons.

Table 2.1. Ecological and Resilience Concept Matrix

| Bronfenbrenner's Ecological Framework | Concepts from Individual Resilience | Bubolz & Sontag's Family Ecological Framework | Concepts from Family Resilience |
|---|---|---|---|
| Proximal processes | Risk factors and Protective mechanisms with which an individual interacts within the proximal environment | Resource management and decision making of the family in response to normal stress and adversity | Adjustment, adaptation of a family in response to adversity |
| Person | Characteristics/ attributes of an individual and propensity for adaptation to change and adversity | Family | Capabilities, resources, meanings and beliefs of families to respond and adapt to change and adversity |
| Context | Risk factors and protective factors within the environment or situation | Environments | Significant risk exposure and protective factors within proximal and distal environments which can affect a family's functioning |
| Time | Developmental outcomes over time | The role of time | Family level outcomes over time |

**Ecological And Resilience Processes At The Individual Level**

This section will discuss key concepts and processes related to ecological influences on mothers with depression, and how those influences are related to the process of resilience. As a departure from most ecological discussions, but consistent with a life span development approach, this section views the mother with depression as the developing individual of interest, rather than the child. Bronfenbrenner's Process-Person-Context-Time model (PPCT) (as

discussed by Tudge, Mokrova, Hatfield & Karnik, 2009) will provide the structure for this discussion of ecological and resilience processes at the individual level.

**Proximal processes.** Proximal processes refer to the reciprocal, progressively complex interactions between the developing individual and his or her immediate surroundings, which include other people, material objects, and cultural or social symbols and meanings (Tudge, Mokrova, Hatfield & Karnik, 2009). In order to have an effect on developmental outcomes, such proximal processes must take place regularly over extended periods of time. The individual is viewed as an active agent in these processes, and "it is by engaging in these activities and interactions that individuals come to make sense of their world and understand their place in it" (Tudge, Mokrova, Hatfield & Karnik, 2009, p. 200). This is the essence of the first proposition set forth in Bronfenbrenner's later theoretical formulations. His second proposition is interrelated with the first and states that:

> The form, power, content, and direction of the proximal processes effecting development vary systematically as a joint function of the characteristics of the *developing person*; of the *environment*—both immediate and more remote—in which the processes are taking place; the nature of the *developmental outcomes* under consideration; and the social continuities and changes occurring over *time* through the life course and the historical period during which the person has lived. (Bronfenbrenner, as cited in Tudge, Mokrova, Hatfield & Karnik, 2009, p. 200)

Proximal processes, therefore, is a key component to the developing person, as well as to this ecological model. Proximal processes are key to two interrelated components of individual resilience: risk factors and protective mechanisms. Before explaining these terms, it is important to provide a definition of resilience at the individual level. According to Luthar, Cicchetti and

Becker (2000), resilience is a "dynamic process encompassing positive adaptation within the context of significant adversity" (p. 543). The authors then explain that there are two criteria which signify resilience processes. First, the individual must have experienced exposure to significant adversity. Second, the individual has achieved positive adaptation, despite being faced with the adversity.

Risk factors refer to adversities individuals experience which pose a threat to positive development (Masten & Powell, 2003). Such risks may exist within the individual (e.g., low birth weight, mental illness) or in the developing individual's environment (e.g., poverty, divorce, abuse, war). Conversely, *protective mechanisms* are factors and processes that protect individuals from adversities. Protective factors also may exist within an individual (e.g., IQ) or in the individual's environment (e.g., parenting quality), but the emphasis in research is on identifying the mechanisms by which protective factors ameliorate the effect of risk factors on the developing individual. Statistically, researchers look beyond main effects to additive, mediating and moderating effects of the protective factors (Masten & Powell, 2003).

As can be seen risk factors and protective mechanisms are proximal processes. They are most likely to occur as an interaction between the developing individual and those risk factors and protective mechanisms that exist within the individual and his or her immediate environment. As an example, in relation to rural low-income mothers with depression, risk factors may include a mother's depressive symptoms and her perspective on life as risks that exist within her and history of abuse and current unemployment as risk factors that exist in her environment. Protective factors may include her sense of competence as a mother and the social supports she has available. As an example of proximal processes, the mother actively taps into

sources of social support in her immediate environments that reinforce her in her parenting role, which then alleviates some of the stress and strain created by her risk factors.

**Person.** Bronfenbrenner (1989) viewed the individual as an active agent with capacities to interact with and change the environment, thereby contributing to his or her own development. He identified three types of capacities, or characteristics, which he called *demand, resource,* and *force* characteristics (Tudge, Mokrova, Hatfield & Karnik, 2009). Demand characteristics are those that may immediately influence interactions with another person, such as physical appearance, age, gender, or skin color. Resource characteristics include mental and emotional resources (intelligence, skills, past experiences), and social and material resources (access to material necessities, and educational or occupational resources). Force characteristics enable the individual to be more interactive with environments, and include temperament, motivation and persistence. Motivation is an important force characteristic an individual can tap to influence her own development and change the environment.

Masten and Powell (2003) list several *characteristics*, or *attributes*, of the developing individual that are congruent with the resource and force characteristics just described. Such attributes include cognitive abilities, self-perceptions of competence or worth, temperament or personality, self-regulation skills, and outlook on life. These characteristics are viewed by resilience researchers as protective factors that "have the potential to counterbalance adversity in an additive model of resilience in which assets outweigh risks" (Masten & Powell, 2003, p. 13). *Adaptation* refers to a process in which individuals or systems learn to survive changes or harsh conditions in their environments (White & Klein, 2008). According to a resilience conceptualization, individuals are active agents in their resilience processes in the ways they employ personal attributes as they interact with adversities.

The rural low-income mothers in this study are viewed as having characteristics or attributes similar to those described in this section. Such characteristics enable them to actively engage other resources within their environments, thereby influencing their own development or adaptation in their roles as mother and influencing their environment (Tudge, Mokrova, Hatfield & Karnik, 2009).

**Context.** *Context* refers to the four interrelating environments for which Bronfenbrenner's ecological model has been known since his earlier writings (1986, 1989, 1994, and earlier), and include the microsystem, exosystem, mesosystem and macrosystem. Most of the development and proximal processes discussed previously take place within the microsystems with which rural low-income mothers interact on a regular basis. Contextual attributes involve close relationships and relational patterns within the microsystems which are likely to influence rural mothers' resilience processes, and include relationships with her spouse or partner, with her children, and connections with peers at work and other extended family members and social networks.

Mesosystems refer to interactions between differing microsystems, or between other systems in the model. Exosystems are those systems which have an indirect influence on the individual. Examples of exosystem effects on a rural low-income mother's resilience processes include the school system, which may or may not provide specialized services for her children, or local social service agencies which decide whether she qualifies for food stamps this month.

Finally, macrosystems encompass the cultural or subcultural value systems, belief systems, laws, resources, and opportunity structures, or structural barriers (Tudge, Mokrova, Hatfield & Karnik, 2009). According to these authors, in order for any value system or other component of the macrosystem to influence a developing individual, it must be experienced

within the proximal processes of the microsystems in which the person is situated. Cultural values and structural supports are very important to resilience processes for ethnic and minority populations. Ungar (2010) suggests that researchers and practitioners place culture and context as more important to resilience processes than individual factors, such as cognitive style or temperament. Examples of macrosystem effects on rural mothers' resilience processes include religious and cultural beliefs, financial supports for farm owners, welfare reform regulations, and disability determination regulations.

**Time.** Time influences individual development, and according to Tudge and colleagues (2009), Bronfenbrenner conceptualized the influence of time as consisting of three subfactors. The first two, micro-time and meso-time, are concerned with events and activities interacting with the individual's development trajectory. Consistent with its name, micro-time is concerned with specific activity that directly involves the developing person (e.g., history of abuse, marriage, birth of children, divorce). Meso-time is concerned with activities in the individual's environment that occur with some consistency (e.g., work schedules, school schedules, appointments with social service agencies, community or family celebrations). Finally, macro-time refers to the chronosystem, which is concerned with historical events occurring during the individual's life time that can have an influence on development (e.g., economic recession, war, natural disasters). For resilience processes, researchers and practitioners are concerned with developmental outcomes as measured at any point in the developing individual's lifetime. Consistent with a process conceptualization, outcomes may differ at any given time during a person's development (Masten & Powell, 2003), such that a young rural mother may be adapting positively in early motherhood, but negatively a few years later when her children become

teenagers. Each of the examples provided for time subfactors can influence resilience processes for rural low-income women, depending on when outcomes are measured.

**Ecological and Resilience Processes at the Family Level**

Similar to the previous section, this section will discuss key concepts and processes related to ecological influences on the family. Family ecological concepts will be connected with related concepts from family resilience, with a focus on applying processes to rural low-income families in which the mother experiences depression. Concepts from Bubolz and Sontag (1993) to be considered include resource management, decision making, adaptation, family, environments, and the role of time. The first three concepts can be conceptualized as akin to proximal processes (Bronfenbrenner, as discussed in Tudge, Mokrova, Hatfield & Karnik, 2009); however, the proximal processes discussed in this section are concerned with family level relational patterns and processes that influence family level outcomes.

**Proximal processes - Resource management.** When Bubolz and Sontag conceptualized family ecology theory in their seminal work (1993), one of their main goals was to emphasize *resource management* in families "for creative adaptation, human development, and sustainability of environments" (p. 419). They defined management as "a comprehensive process involving the attainment, creation, coordination, and use of resources for meeting goals and realizing values" (p. 436). As a comprehensive process, it encompasses several interrelated goal-oriented processes, including problem solving, decision making, goal setting, planning, implementing and evaluating, as well as learning, motivating, mediating, and integrating.

Though resource management is rarely discussed in the literature on family resilience, the connection is implied. One purpose of this discussion is to make that connection more implicit.

First, a definition of family resilience is in order to establish a context for the connection. Using Hawley and DeHaan's definition (1996), family resilience refers to

> "The path a family follows as it adapts and prospers in the face of stress, both in the present and over time. Resilient families respond positively to these conditions in unique ways, depending on the context, developmental level, the interactive combination of risk and protective factors, and the family's shared outlook. (p. 65)

Two family stress and coping theoretical models discussed in the family resilience literature—The Double ABCX Model (McCubbin & Patterson, 1983) and the (FAAR) Family Adjustment and Adaptation Response Model (Patterson, 2002a, 2002b)—mention the existence of resources families possess or tap into in order to mediate the stresses they face, however they do not explore the ways in which families gather, manage and employ those resources. Consideration of these processes within theoretical models has implications for conceptualizing the family's role in resilience processes as more active, intentional, and goal-oriented.

Resource management processes can be further connected with two other family resilience processes, *adjustment* and *adaptation*. According to Patterson (2002a, 2002b), adjustment entails the process by which families balance normal life demands with existing capabilities. Conversely, adaptation is the process by which families restore balance (during or after a crisis) by reducing demands, increasing capabilities, and/or changing meanings (Patterson, 2002a, 2002b). In Patterson's FAAR model, demands are conceptualized as normative and nonnormative demands, strains, and hassles. Capabilities are conceptualized as "tangible psycho-social resources and coping behaviors," (Patterson, 2002b, p. 236). In terms of

family ecology, capabilities can be viewed as resources which need to be activated, managed or acquired to ensure positive adjustment or adaptation.

In relation to rural low-income families, resource management may entail the processes by which families budget their money so they can pay their bills, or harness their level of motivation to invest in the human capital of a family member, such as college or training programs to qualify for a better paying job.

**Proximal processes – Decision Making.** *Decision making* processes, according to Bubolz and Sontag (1993), involve: 1) recognizing a decision needs to be made; 2) identifying and comparing alternatives; and 3) choosing an alternative. Decision making is a complex process because there are times when decisions must be made under conditions of uncertainty, and can involve (but not always) multiple members of the family.

Similar to the discussion above, the resilience models reviewed do not include decision making processes explicitly; however, the concept can be connected in much the same way resource management processes can be connected. As normative, nonnormative stresses or crises arise, *adjustment* and *adaptation* mechanisms involve identifying that a problem needs to be solved, and that a decision needs to be made (even ignoring a stressor is a decision). Families must decide which resources and coping behaviors to employ in order to off-set the demand.

Consistent with resilience processes, it makes sense that resource management and decision making processes are carried out in interaction with *family meanings*. Patterson (2002a, 2002b) discusses three levels of family meanings: 1) a family's appraisal of the demands that are presented, and their appraisal of their capabilities (resources); 2) their identity as a family; and 3) their world view.

Connecting these concepts and processes to the population of interest, rural low-income families employ decision making processes if they need to decide which medications they can afford to buy or which bills they can afford to pay. They also make decisions about which sources of social support will be helpful, such as a relative, close friend, or a social service agency. There are many types of decisions, suggesting that this would be a fruitful area of research in connection with resilience processes.

**The concept of family in relation to family ecology and family resilience.** Through the family ecological lens presented by Bubolz and Sontag (1993), the family is viewed as interactive and interdependent with the larger environment. However it is important to recognize that families bring certain characteristics to the interdependent relationship with the environment that influence the nature of the interactions that take place. Family characteristics are also important to resilience processes. However, it is important to begin a discussion of family characteristics with a conceptualization of *family* because agreement on a definition of the term has been difficult to achieve in the family science field (Arcus, Schvaneveldt & Moss, 1993; Duncan & Goddard, 2005).

The term *family* was conceptualized by Bubolz and Sontag (1993) to be inclusive because of the variety of family structures that exist in our culture. According to these authors, families are "composed not only of persons related by blood, marriage, or adoption, but also sets of interdependent but independent persons who share some common goals, resources, and a commitment to each other over time" (p. 435). An important point these authors make is that families themselves must determine who is a part of their family.

This conceptualization speaks to the first family characteristic to be briefly addressed: structure. Family structures have become diverse and complex (e.g., two-parents, single-parent,

childless couples, step-families, families with same-sex parents, cohabitating couples with children, grandparents raising grandchildren), especially with the rise in divorce and remarriage. The important point is that families need to define for themselves their family boundaries, and determine who is in and who is outside of the family.

The second characteristic is ethnic or national origin. Through their ethnicity, families present physical characteristics, as well as values and beliefs to their interactions with other environments. The third characteristic is life stage. Consistent with a family life course developmental framework (White & Klein, 2008), the family ecological perspective is concerned with change and development within families and among the individuals in them. The final characteristic is socioeconomic status, which influences how families see themselves, how they interact with the world, and how they access resources.

As Bubolz and Sontag (1993) point out, "families, regardless of their particular structure…ethnic or national origin, life stage, or socioeconomic status, transform matter—energy and information and engage in adaptation" (p. 438). According to Patterson's Family Adjustment and Adaptation Response (FAAR) Model (2002a, 2002b), families bring these resources to resilience processes in the shape of capabilities, resources, and meanings and beliefs in order to counterbalance the stresses and adversities they face.

**Family environmental context.** Context at the family level refers to the interrelated environments described by Bubolz and Sontag (1993) in which family is at the center and is shown to be interdependent with each environment. The *natural physical-biological environment* consists of the resources of this world as they exist unaltered in nature. This environment is important for human survival and sustenance. However, it is also important because it provides a backdrop for the spaces humans create in which they live and play. As the

authors point out, "people develop emotional attachments to their environments" (p. 433). Within the natural physical-biological environment, many families escape from the daily pressures of life to spend time together, through family vacations to the mountains, or a day fishing at a local pond. Rituals and stories experienced in this environment help families create meaning. Such meanings create a sense of unity and family identity, a type of armor families don to get through rough times. *Family meanings* are important to the resilience process because they can help shape a family's mindset as they balance the demands imposed by crisis events (Patterson, 2002a, 2002b).

The natural physical-biological environment also can impose risks, as is the case when natural disasters strike. Such occurrences can cause significant risks or crises for families, as homes, properties, or even whole cities can be destroyed, as we saw in the cases of hurricane Katrina in New Orleans, hurricane Sandy along the Atlantic coast, and the earth quake and ensuing tsunami in Sendai, Japan. Disasters like those just described can pose increased risk for rural low income families, who may have limited resources available to them. However, resilience processes are activated when families learn to cope and adapt to the circumstances.

The human built environment consists of "alterations and transformations made by humans of the natural physical-biological environment" (Bubolz & Sontag, 1993, p. 432). In other words, it is the result of humans interacting with the natural physical-biological environment. The *adaptations* humans make by building homes, towns, roads, farm lands, and other structures are *protective factors* that are necessary for survival and sustenance. However, there are *risk factors* that also have been created by humans as a result of these adaptive processes. Polluted air, water, and soil are byproducts of these interactions, and they pose risks, not only to humans, but also to the natural physical-biological environment. Other risks can

include the decay of homes and other buildings, fires caused by unsafe practices, or traffic accidents caused when humans travel. These and many other risks can cause harm to humans and the natural environment. Family resilience processes are evident when these human built disasters occur.

The social-cultural environment (Bubolz & Sontag, 1993) is more abstract, but is important to family resilience processes as it includes relationships, patterns of interacting, values, and beliefs and norms. It also includes social structures, such as institutions, community groups, governments, economies, laws and languages. It is within this environment that many stressors and crises become visible as families adapt to changes in economies, downsizing of workplaces, or changes in laws. With limited resources, rural low income families are at increased risk when there are changes in laws (e.g., welfare reforms regulations) or when there are limited resources available, such as employers or health care providers. Protective factors for these families, such as social service agencies and local food pantries, become important resources for rural family resilience processes.

**The role of time.** Like the development of individuals, family development also occurs within the context of time. "The cyclical, recurring, and sequential nature of events in the family ecosystem and changes and adaptations over time are of special interest in an ecological perspective" (Bubolz & Sontag, 1993, p. 430). For resilience processes, time is needed for families to respond to risks, engage in protective processes, and adapt to nonnormative demands at the same time they must accommodate normative life demands (Patterson, 2002a). In addition, it is important to consider the interactive nature of time and family life when thinking about family level outcomes of resilience processes. Similar to resilience at the individual level, outcomes of family resilience processes can differ depending on the point at which outcomes are

assessed. For example, a young family who loses a mother to cancer may not function competently in the first year after the mother's death; however, over time the young family may recover from the crisis to function competently.

In determining criteria for competent functioning for family level outcomes, Patterson refers to Ooms' model of the four core functions of the family to meet individual, family and societal needs (as discussed in 2002a, 2002b), and those include: nurturance and socialization; family formation and membership; economic support, and protection of vulnerable members. Patterson suggests that one way to conceptualize family level outcomes of a resilience process is to consider whether a family fulfills one or more of these core functions. For rural low-income families in which the mother experiences depression, a researcher or practitioner might consider whether the family is healthy (nurturance and socialization) or whether the parents can provide for basic needs of food, shelter and clothing (economic support).

**Summary**

This section has provided a comparative discussion of relationships between two ecological models and resilience conceptualizations at the individual and family levels. The purpose of this discussion was to provide a framework for the current studies of rural low income mothers and their families in relation to the influence of longitudinal depression patterns on mothers' resilience processes and on the resilience processes of their families.

Because of the importance of depression to the lives of rural mothers and their families, and because of its application to the theoretical framework put forth in this chapter, it is important to understand the nature of depression and its far reaching consequences. Therefore, the following section of this literature review provides a broad overview of depression.

## Depression

Depression is a disease that can have harmful consequences for individuals and their families. Depression can be characterized by a constellation of behaviors and symptoms that affect physical abilities (e.g., psychomotor agitation or retardation, fatigue, decreased appetite, weight loss, insomnia or hypersomnia), emotions (e.g., feelings of guilt or worthlessness), and cognitive abilities (e.g., difficulty with memory or concentration, suicidal thoughts) (Gotlib & Joormann, 2010). According to Gotlib and Joormann, "depression is primarily a disorder of emotion dysregulation and sustained negative affect" (p. 287).

Hammen (2009) describes depression as a complex construct to measure as it "varies in chronicity, severity, and impairment" (p. 277). Further highlighting the complexity of depression as a construct, Boland and Keller (2009) describe the episodic and chronic nature of depression. For instance, longitudinal studies must carefully consider key points at which change occurs in a depressive course. Key change points defined by the authors include episode, remission, response, relapse, and recurrence. They further state that when considering the recurring course of depression and its subtypes, it is more useful to think of depression as dimensional rather than categorical (i.e. chronic major depressive disorder, dysthymic disorder, double depression, or major depressive disorder) because the distinctions between subtypes are clinically ambiguous.

In addition to the aforementioned difficulties in specifying course and subtypes, psychological research also has revealed other heterogeneous aspects of depression, such as genetic and neurobiological aspects, and cognitive and interpersonal aspects (see Gotlib & Hammen, 2009; and Joiner, Brown & Kistner, 2006). These aspects of depression are conceptualized in the psychological literature as vulnerabilities that interact with environmental

or situational stressors, leading to a depressive episode. That is, while the presence of one or more vulnerabilities may lead to depression in someone's lifetime, it is more likely to lead to depression when a stressful environmental or situational stressor occurs. For example, research has identified genetic tendencies toward the development of depression in families; however the risks increase in the face of traumatic experience such as a death of a close family member or physical and sexual abuse or emotional neglect (Levinson, 2009).

In this section several research areas of depression, as mentioned above, will be described broadly. While it is beyond the scope of this dissertation to hypothesize about a relationship between the genetic and neurobiological vulnerabilities of depression and depression among this community-based sample of rural low-income women in these studies, it is useful to provide a general discussion of these two aspects in order to contribute to a comprehensive understanding of the heterogeneous and complex nature of depression. The cognitive, social, and developmental vulnerabilities of depression also will be discussed; however these vulnerabilities are seen as informative to the conceptualization of depression in the present studies. It should be noted that the research summarized in this section is based on clinical samples of depressed patients. However the results of those studies are informative to an understanding of depression that can be applied to research on depressive symptoms within community-based samples.

**Genetic Vulnerabilities**

An important line of research on genetic vulnerabilities involves family and twin studies. In a meta-analysis of several family adoption and twin studies, Sullivan, Neale, and Kendler (2000) found that heritability of major depression in general is likely to range from 31 to 42 percent. Genetic vulnerability increases substantially when three factors are considered for

major depressive disorder (MDD): recurrence, age of onset, and severity (number of MDD symptoms) (Levinson, 2009). In their meta-analysis, Sullivan, Neale, and Kendler (2000) found that recurrence of MDD consistently predicted genetic vulnerability. There have been mixed findings in regard to the predictive validity of age of onset. According to Levinson (2009), among people with MDD, the risk of heritability increases the younger the person is at the onset of the first episode of depression. The risk for genetic vulnerability decreases when age of onset is above the age of 40. Some studies suggest that vulnerability increases further when there is both recurrence and early age of onset (Levinson, et. al., 2003).

**Neurobiological Vulnerabilities**

Two distinctive, yet closely related lines of research have emerged that provide insight to the ways depression influences various functions in the brain. The first line of research to be discussed focuses on the dysfunctions that develop in the central nervous system and other brain systems in response to stress. The second line of research focuses on some of the physical structures of the brain and their roles in emotion and emotion regulation.

Numerous studies over the past several decades have been important for informing scientists and clinicians about some of the neurobiological aspects of depression. The first line of research to be discussed provides details on the highly complex ways in which hormones, neurotransmitters and brain systems develop dysfunctional adaptations to stress. This is important because the brain systems affected are responsible for the regulation of mood, cognition, and behaviors related to appetite (Thase, 2009). This review will not provide a detailed discussion of each brain system and their respective relationships with neurotransmitters and hormones, however it is important to highlight particular brain systems and note how their response to stress relates to the manifestation of depression symptoms.

Studies have shown that the noradrenergic systems in the brain play a role in the experience of stress, particularly the perception of threatening stimuli (Thase, 2009). According to Thase, sustained response to stress is associated in the noradrenergic system with learned helplessness in both animals and humans. Learned helplessness in humans involves a perception that desired outcomes are highly unlikely, or conversely, that negative outcomes are very probable. The individual exhibiting learned helplessness has the expectation that he or she is powerless to change the outcome (Abramson, Seligman, & Teasdale, 1978); depression is likely to result.

The serotoninergic systems have been shown to be responsible for several bodily functions, such as appetite, the regulation of circadian rhythms, social and goal directed behaviors, and impulsivity and aggression among humans and animals. In humans, these systems also have been associated with suicidal and violent behaviors (Thase, 2009). In his review, Thase (2009) explained that the serotoninergic systems are partly under genetic control. Research in this area has revealed that individuals with one or two copies of the *S* allele (a genetic code associated with the serotoninergic systems) are genetically vulnerable to the development of depression (Firk & Markus, 2007; Thase, 2009). According to Firk and Markus (2007), otherwise healthy individuals who have this genetic marker may have a reduced capacity to develop coping mechanisms in response to stress, particularly acute or prolonged stressful situations. Interestingly, this vulnerability to depression has been shown to be influenced by social support (Firk & Markus, 2007). That is, in studies of maltreated children with this genetic marker, those with good social support reported only slightly higher depression scores. However, maltreated children with this genetic marker who did not have good social support reported significantly higher levels of depression.

The dopaminergic systems have been implicated in learned helplessness and social defeat. Similar to the previous two systems reviewed, the dopaminergic systems develop dysfunctional adaptations when an individual experiences chronic stress and these adaptations result in behavior changes that are associated with depression.

Taken together, it is apparent that the brain systems described above are associated with various mechanisms involving hormonal secretions, neurotransmitters, and interrelated brain structures that are important for regulating mood and cognition, responses to stress, quality of sleep, appetite, and violent and aggressive behaviors associated with suicidal thoughts and tendencies. In addition, there is evidence that genetics and genetic-environment interactions relative to these brain systems play a role in the level of risk for developing depression and other mood disorders.

The second line of research to be discussed emerges from affective neuroscience, and focuses on the structures of the brain responsible for emotion and emotion regulation, including dysfunctional circuitry associated with depression. Four structures to be discussed in this section include the prefrontal cortex (PFC), the anterior cingulate cortex (ACC), the hippocampus, and the amygdala.

As a whole the prefrontal cortex is responsible for maintaining the representation of goals and the means by which to achieve goals (Davidson, Pizzagalli & Nitschke, 2009) and is related to instant versus delayed gratification in goal-directed behaviors. Research on the prefrontal cortex (PFC) has identified that right-sided regions in particular seem important for maintaining goals requiring delayed gratification (Davidson, Pizzagalli & Nitschke, 2009). These authors also suggest that depressed individuals who exhibit hypoactivation of certain PFC regions may be deficient in instigating goal-directed behavior, and in overriding automatic negative affective

responses and dysfunctional attitudes. These responses are also important in situations involving reward and punishment. For example, in laboratory experiments, individuals with depression showed a response bias toward punishment, whereas non-depressed individuals showed a response bias toward rewards (Henriques & Davidson, 2000; Davidson, Pizzagalli & Nitschke, 2009).

Further research using imaging technologies reveals that individuals with depression exhibit deactivation in several areas of the prefrontal cortex (Davidson, Pizzagalli & Nitschke, 2009). Deactivation also has been shown to be associated with a reduced volume of gray matter. Davidson, Pizzagalli and Nitschke (2009) reviewed several studies that confirmed the association between depression and reduction in the size and volume of several regions of the PFC and found that the incidence is higher among patients with unipolar and bipolar depression who also had a family history of mood disorder. Thus it appears that there is a genetic component to the relationship between depression and PFC size and volume. Interestingly and very importantly, there is evidence in research involving postmortem brains of patients with mood disorders that reduction in PFC size and volume may actually be associated with cell atrophy rather than cell loss (Rajkowska, 2000).

The anterior cingulate cortex (ACC) is hypothesized to function as a bridge between attention and emotion, is critical for self-regulation and adaptability, and is also critical in selective attention (i.e., prioritizing information), affect, and specific social behaviors (Davidson, Pizzagalli & Nitschke, 2009). Davidson and colleagues (2009) describe two subdivisions within the ACC: affective subdivisions and cognitive subdivisions. Affective subdivisions regulate the body's physical responses to stressful behavior and emotional events, emotional expression, and social behavior. Cognitive subdivisions are associated with response selection and processing

cognitively demanding information. According to Davidson, Pizzagalli and Nitschke (2009), the cognitive subdivisions of the anterior cingulate cortex monitors communication, or cross-talk, between different regions of the brain, such that activation in this area of the brain further activates other areas. It appears that this may be a mechanism for effortful control, that is, emotion regulation in the face of competing demands or conflict. There is evidence that activation of the cognitive subdivision can occur in order to trigger effortful emotional control, for instance, in situations where an individual is failing to achieve a desired outcome or in the presence of reward or punishment (Davidson, Pizzagalli and Nitschke, 2009; Bush, Luu & Posner, 2000). According to Etkin, Egner, and Kalisch (2011) the dorsal ACC and the medial prefrontal cortex work together during emotional conflict regulation processes, such as reappraisal. For instance, in a conflict situation, there is an initial negative emotional appraisal process and a reappraisal process where an additional positive appraisal is created to off-set or compete with the original negative appraisal.

Among studies using various imaging and EEG technologies, it has been found that behavior impairments in patients with major depression is associated with exaggerated automatic detection of unfavorable performance outcomes and inability to recruit cognitive control after committing an error (Davidson, Pizzagalli and Nitschke, 2009). These authors also describe reduction in gray matter volume in areas that border the ACC.

The hippocampus is the third structure of the brain discussed by Davidson, Pizzagalli and Nitschke (2009). The hippocampus is critical to episodic, declarative, contextual, and spatial learning and memory. Studies using magnetic resonance imaging reveal atrophy of the hippocampus in patients with major depressive disorder and borderline personality disorder (Davidson, Pizzagalli, & Nitschke, 2009). It appears that older age, severity of depressive

symptoms, and length of recurring episodes may moderate atrophy. The aforementioned authors also describe twin studies that suggest a gene-environment interaction. That is, volume reduction in the hippocampus was only shown in the twin that was at risk for depression and anxiety, compared to the other twin. It is important to note that there is some evidence (based predominantly on animal studies) that regeneration of the hippocampus can occur in response to antidepressant medications, electroconvulsive shock, or, most interestingly, as a consequence of positive handling, learning, and exposure to enriched environments. This finding in particular has implications for treatment, education, and support for individuals with depression.

The amygdala is the last structure of the brain to be discussed in this section. The amygdala plays an important role in negative affect, and is critical for coordinating cortisol arousal and attention for negative bias in the face of ambiguity (Davidson, Pizzagalli, & Nitschke, 2009). According to these authors, in experiments where emotion was down-regulated, there was a decrease in amygdala activation and increase activation in an area of the prefrontal cortex, which is indicative of good emotion regulation.

According to the review conducted by Davidson, Pizzagalli and Nitschke (2009), there is an association between an increase in amygdala volume and depression. In particular there is an asymmetry that occurs in patients with major depression such that the right side of the amygdala is smaller than the left side. In addition it has been shown that an increase in amygdala activity is associated with bipolar and anxiety disorders.

It is apparent from the discussion of the second line of research stemming from affective neuroscience that the four structures of the brain just described represent complex functioning within and between these structures. Their relationships with depression reflect dysfunctions in goal directed behaviors, especially those related to instant versus delayed gratification, regulation

of negative affective responses, emotional and cognitive control in relation to sensitivity to error detection, and a bias toward negativity when faced with ambiguity. In addition, depression has been shown to be associated with decrease in size and volume of areas of the prefrontal cortex, and the anterior cingulate cortex, as well as atrophy of the hippocampus and asymmetry in the size of the amygdala. Further, similar to other neurobiological vulnerabilities discussed, there is evidence for genetic components related to these structures that place individuals at risk for depression, particularly when the individual is exposed to environmental stressors, such as maltreatment or traumatic experiences.

**Cognitive Vulnerabilities**

Cognitive theories of depression propose that the way people think about, interpret, explain, and develop attitudes to events in their lives determines their emotional responses. When people develop negative cognitions about the events in their lives, they are said to be vulnerable to depression (Abramson & Alloy, 2006; Joormann, 2009). Over the past several decades, two models have been influential in conceptualizing depression in the psychological literature: the hopelessness model (Abramson & Alloy, 2006; Alloy, Abramson & Francis, 1999); and Beck's schema theory of depression (as discussed in Abramson & Alloy, 2006; and Joormann, 2009). In addition, more recent mechanisms have been proposed that are important for understanding the relationships between negatively biased cognitive processes and emotion dysregulation that is characteristic of depression.

The hopelessness model of depression is a revision of Seligman's concept of learned helplessness (Abramson, Seligman, & Teasdale, 1978). Seligman developed the learned helplessness concept while conducting experiments with animals and humans. He discovered that learned helplessness develops when an organism learns that expected outcomes are

uncontrollable regardless of the organism's attempts. In response to the uncontrollable outcomes the organism develops motivational, cognitive and emotional deficits (Maier & Seligman, 1976).

Abramson and colleagues refined Seligman's theory and proposed that hopelessness occurs (in humans) when an individual holds an expectation that desired outcomes are highly unlikely, or negative outcomes are very probable. The individual exhibiting hopelessness has the expectation that he or she is powerless to change the outcome, and hopelessness depression (a subtype of depression) is likely to result (Abramson, Metalsky & Alloy, 1989). They describe their model as a causal chain in which hopelessness is preceded by more distal causes, beginning with the perceived occurrence of a negative life event.

The occurrence of a negative life event, by itself, does not always lead to hopelessness and depression. Rather, there are three possible causal inferences the individual can make about the life event that can lead to hopelessness and hopelessness depression:

1. The individual might attribute the negative life event to stable and global causes (i.e., likely to last a long time and likely to affect many areas of life). This can lead to hopelessness if the individual attaches a high degree of importance to the event.
2. The individual might infer negative consequences about the negative life event. The attributed importance of the negative consequence and the perception that the consequence will likely affect many areas of life is likely to lead to hopelessness. In the present studies, a single rural low-income mother losing her job could be seen as a negative event with important consequences that will likely affect many areas of her life.
3. Given the negative life event, an individual might infer negative characteristics about his or her self. Examples of negative self inferences could include inferences about one's worth, personality, abilities, or desirability. If the person feels the inferred

characteristics are not likely to change, and will affect outcomes in many areas of life, the likelihood of developing hopelessness increases.

Further, the authors propose a diathesis-stress component as a more distal cause of hopelessness and hopelessness depression. Depressogenic attributional style refers to a general tendency some people have to attribute negative events to stable, global factors, especially when those negative events occur within a particular domain of life (e.g., interpersonal relationships). Thus the depressogenic attributional style (diathesis) is a distal contributing cause "of the symptoms of hopelessness that operates in the presence, but not in the absence, of negative life events (the stress)" (Abramson, Metalsky & Alloy, 1989, p. 362).

Similar to, but distinctive from hopelessness theory is Beck's schema theory of depression (as discussed in Joormann, 2009). According to this theory, individuals filter stimuli from the environment through schemas (existing memory representations). The way information is filtered directs individuals' attention toward information that is congruent with their schema. Negative schemas of depressed people can include themes of loss, separation, failure, rejection, or abandonment. Thus there is a systematic bias in the way such individuals process information relative to these themes. These negatively biased schemas are triggered by stressors, and then negative thought processes about the self, the future, and the world dominate. Further, depressed people select their attention toward stimuli in their environment in a way that is congruent with their schema. These schemas are said to endure beyond depressive episodes, representing a stable vulnerability. The schemas can remain latent, but when activated by a stressor, "schema-influenced negative thoughts and processing biases initiate and maintain depressed mood through a vicious cycle of increasingly negative thinking and negative affect" (Joormann, 2009, p. 300). These automatic negative thoughts, generated by negative cognitive processes, revolve

around pessimistic views about the self, the world, and the future. Cognitive theorists call this the cognitive triad (Gotlib & Joormann, 2010). Individuals with negative schemas (or automatic negative thought processes) that endure beyond depressive episodes are said to have dysfunctional attitudes.

Since the formulation of these two cognitive models, researchers have had mixed results with confirming their viability, particularly in attempting to gain further understanding between negative cognitive thought processes and sustained negative affect that is characteristic of major depression (see Gotlib & Joorman for a more extensive review). Studies have since suggested that depressed people do not direct their attention to negative information per se; however they do seem to have difficulty disengaging from it (Joorman, 2009; Gotlib & Joormann, 2010). Further studies indicate that depressed people exhibit dysfunctional cognitive inhibitory control over information kept in working memory. In healthy individuals, cognitive inhibitory control is a mechanism used to balance the maintenance and manipulation of information in working memory, for the purpose of controlling attention (Gotlib & Joormann, 2010). That is, executive processes must constantly update material in working memory that is relevant to the current context. Material that is relevant to the current context is allowed access to working memory by executive controls, while material that is no longer relevant is discarded from working memory. Depressed individuals, on the other hand, exhibit impairment in the ability to control the processing of emotional material, and specifically have difficulty discarding irrelevant material from working memory. Thus there is evidence that depressed people have trouble inhibiting, or controlling, mood-congruent material, which could result in prolonged processing of negative, irrelevant material, leading to sustained negative affect (Joormann, 2009; Gotlib & Joorman, 2010). Gotlib and Joormann (2010) further explain that the aforementioned process sets the

stage for ruminative thinking. That is, they are prone to elaborating on negative material and have difficulty stopping or inhibiting their attention and thought processes away from it.

The information in this section on cognitive vulnerability to depression lays a foundation for understanding how depression may be played out in the lives of the rural low-income women in the present studies. As indicated above, initial perceptions of negative life events and stressors could play a key role in how those life events may affect their depression levels, as well as their ability to function in their family roles. Perceptions and cognitive processes that persist over time may influence their longitudinal depression patterns. Although experimental interventions typically used in psychological research were not utilized for the present studies, longitudinal mixed methods investigations may shed light on how cognitive and emotional mechanisms characteristic of depression influence individual and family functioning.

**Interpersonal Vulnerabilities**

Theories of interpersonal vulnerability to depression have centered on the close relationship between environmental (stressor events) and interpersonal attributes (e.g., dysfunctional relationships and early attachment experiences) that may play a role in the development of depressogenic cognitions (Hammen, 2006; Hammen, Burge, Daley, Davila, Paley & Rudolph, 1995). This perspective is informed by Bowlby's theory of attachment, which posits that humans need to maintain a relatedness with others for survival. More specifically, attachment is a developmental process "directed at a specific partner…who can be relied on for protection and comfort" (Bell, 2009). Attachment experiences early in life are likely to be continuous and influence attachment later in adult relationships. Therefore, negative attachment experiences in childhood may lead one to develop negative relationship patterns in adulthood based on dysfunctional interpersonal schemas (e.g., rejection, distrust, abandonment) (Hammen,

Burge, Daley, Davila, Paley & Rudolph, 1995). According to the interpersonal vulnerability perspective, individuals with dysfunctional interpersonal cognitions are likely to develop depression when faced with negative interpersonal life events, such as conflicts, divorce, job loss, or loss of a close friend due to illness or relocation (Hammen, Burge, Daley, Davila, Paley & Rudolph, 1995).

This perspective has implications for the present study because of the relationship between attachment cognitions and social support. That is, individual's attachment cognitions have been shown to be associated with their perception of social support (Herzberg, Hammen, Burge, Daley, Davila & Lindberg, 1999). Hammen (2006) found that romantic partners of depressed young women reported providing less social support, but the young women's best friends reported providing more social support. Interestingly, the young women perceived receiving less social support from their best friend, indicating that their attachment cognitions influence the way they perceive the social support they actually receive.

This is important to the present studies because perceived access to social support has been found in some studies to buffer the relationship between life events and levels of depressive symptoms (Coiro, 2001; Dennis, Parke, Coltrane, Blacher, & Borthwick-Duffy, 2003; Ennis, Hobfall & Schroder, 2000). Social support also can be seen as an important component of resilience processes in response to the stress of depressive episodes, as described in a later section.

**Summary**

The current section provided a broad discussion on the complex nature of depression, including several components of depression, such as genetic and neurobiological aspects, and

cognitive and interpersonal aspects (see Gotlib & Hammen, 2009; and Joiner, Brown & Kistner, 2006). These components of depression are conceptualized in the psychological literature as vulnerabilities that interact with environmental or situational stressors, leading to a depressive episode. In connection with the proposed ecological-resilience theoretical framework for this dissertation, these vulnerabilities represent potential characteristics or attributes the developing individual (rural mother in these studies) possesses with which to interact with family and environmental stressors.

## Depression in Women and Factors Associated with Maternal Depression

This section narrows the discussion to the literature on depression among rural low-income women. It begins with a broad explanation of gender differences to explain some of the reasons why women are more likely to suffer from depression than men. The discussion then narrows to factors that are associated with depression among mothers, such as parental confidence, social support, and perceived economic strain. Finally, this section further narrows to factors related to maternal depression among rural low income women, and ends with a summary of findings from the Rural Families Speak project.

### Depression in Women

The research has been clear and consistent that major depressive disorder is twice as common in women as in men (Kessler et al., 2003; Nolen-Hoeksema & Hilt, 2009; Substance Abuse and Mental Health Services Administration, 2010). What has been less clear and consistent are the reasons for the persistent gender differences. Based on the literature, the complexity of the reasons for and nature of the gender differences is consistent with the complexity of the disorder itself. Depression, as stated previously, is complex because of its variability and heterogeneity. There are many potential causes and the onset, duration,

recurrence, and episodic nature of depression make it difficult to measure as a construct (Hammen, 2009). For example, it has been found that women have a greater number of first onsets of depression (Nolen-Hoeksema & Hilt, 2009), and this gender difference begins in early adolescence between the ages of 13 and 15, is greatest between 15 and 18 (Hankin, Abramson, Moffitt, Silva, McGee & Angell, 1998), and continues over the life span (Leach, Christensen, Mackinnon, Windsor & Butterworth, 2008). However, several studies indicate that there are no gender differences in the severity or length of depressive episodes (as discussed in Nolen-Hoeksema & Hilt, 2009).

Some studies focus on biological explanations for gender differences, particularly hormonal differences and genetic factors. For instance, because gender differences do not appear until early adolescence, the hormonal changes occurring at puberty are thought to be a possible explanation, the timing of puberty in particular (Nolen-Hoeksema & Hilt, 2009). Several studies have shown that girls who mature faster than their peers are at a higher risk for developing depression and several other psychological disorders (Conley & Rudolph, 2009; Ge, Kim, Brody, Conger, Simons, Gibbons, et. al., 2003; and as discussed in Nolen-Hoeksema & Hilt, 2009). Other hormonally based explanations during other stages of life include the premenstrual phase of the menstrual cycle, postpartum depression, and menopause (Nolen-Hoeksema & Hilt, 2009). Goldberg (2006) proposed that there is a genetic explanation related to estrogen cycles that contribute to gender differences.

Psychological explanations for the gender differences in depression include interpersonal vulnerability and rumination (Nolen-Hoeksema & Hilt, 2009), as described in previous sections. Women are more likely than men to develop self-concepts that are relative to their roles in life and the relationships they develop (Nolen-Hoeksema & Hilt, 2009). Cambron, Acitelli and Pettit

(2009) propose that women are more likely to develop interpersonally contingent self-esteem (ICSE) than men. That is, their self-esteem is contingent upon the quality of their interpersonal relationships. The authors explain that such behaviors as reassurance seeking and negative feedback seeking tend to worsen interpersonal relationships and increase depressive symptoms. Other research related to rumination have found that women are more likely than men to ruminate in response to sad moods or negative life events (Nolen-Hoeksema & Hilt, 2009). Further, it has been found that rumination predicts new onsets of a major depressive episode, but does not predict duration (Nolen-Hoeksema, Wisco & Lyubomursky, 2008), which parallels findings about gender differences in the onset, but not duration of depressive episodes.

Socially related explanations of the gender differences are centered on negative life events that women are more likely to face than men, such as traumatic events and childhood adversity (Nolen-Hoeksema & Hilt, 2009). These authors explain that women are more likely than men to experience physical and sexual abuse in childhood and adulthood, and girls are more likely to be affected by their mothers' depression as a childhood adversity than boys.

**Depression and Parenting Confidence**

A sense of confidence in one's parenting abilities has been found in the literature to have mediating effects in regard to several parenting stressors (e.g., personality or depression) and their relationships to child outcomes. However, there are inconsistencies in the terminology used for this concept in the literature. Parental confidence, parental competence, and parental sense of self-efficacy have each been used in research on parenting, and all seem to be defined similarly. Ontai, Sano and colleagues (2008) defined parental confidence as "the degree to which parents perceive themselves as capable and effective in the parenting role" (p. 325). They equated the term as synonymous with self-efficacy. Parental sense of competence has been defined as "the

belief of parents that they can effectively manage parenting tasks" (de Haan, Prinzie & Dekovic, 2009). These authors also stated that parental sense of competence is synonymous with parenting self-efficacy. However, Coleman and Karraker (2003) defined self-efficacy beliefs as "parents' self referent estimations of competence in the parental role" (p. 128), and they further conceptualized it as "parents' perceived ability to positively influence the behavior and development of their children" (p. 128). The distinctions between the terms are slight, but it appears that parental self confidence is synonymous with parenting self-efficacy beliefs in that they focus more on the *internal perceptions* and *beliefs* of the parent about their parenting abilities. Conversely, parental competence reflects the *overt parenting behaviors* performed in order to influence child behaviors and development.

To be consistent with the larger Rural Families Speak project, the present studies use the term parental confidence and the definition put forth by Ontai, Sano and colleagues (2008, also connected with Rural Families Speak). However, this section of the literature review will use the terms as used in their respective studies.

In their study, Ontai, Sano, Hatton and Conger (2008) used parental confidence as their dependent variable and found that rural low-income mothers' parental confidence was directly influenced by the presence of family health problems, which were conceptualized by the authors as daily hassles. However, the relationship was mediated by the presence of parental support for mothers with partners, but not for single mothers. That is, the strength of the negative influence of family health problems on parental confidence was decreased when rural mothers were married or had a partner living in the home. It appears that for the daily hassles of family health problems, having another adult in the home helps alleviate the strains brought on by those daily hassles.

Most studies employ parental confidence as a mediating or moderating variable. For example, Knoche, Givens & Sheridan (2007) found that adolescent mothers with high levels of depression but whom also had a high sense of parental competence had children who scored higher on cognitive tests. This is in comparison to adolescent mothers reporting high levels of depression and a low sense of parental competence, whose children scored lower on cognitive tests.

A sense of parental competence also has been found to be an important mediator for the influence of parents' personality characteristics (e.g., extraversion and agreeableness) and their parenting characteristics (e.g., warmth, overreactivity) (de Haan, Prinzie & Dekovic, 2009). These authors were able to show that a sense of parental competence is a mechanism by which parents' personality influences their parenting behaviors. In another study, Jackson and Scheines (2005) found that parent self-efficacy beliefs were a mechanism which mediated the effects of maternal employment on parenting behaviors and child outcomes.

Thus the research points to the importance of parental confidence to family relationships and functioning. Parental confidence can be a protective factor for families, and was shown in the research discussed to be an important process variable. It is important that researchers continue to explore the nature and interactions between parental confidence and several family outcomes, as well as interactions with other process variable, such as social support. Social support was reported earlier to mediate the relationship between family health problems and parental confidence in our sample of rural low-income women (Ontai, Sano, Hatton and Conger, 2008). Similarly, Bulock (2004, 2007) found that parental social support (that is, social support specific to the parenting role) mediated the relationship between parental confidence and

maternal depression among rural low-income women. The following section further discusses the role of social support in depression among mothers.

**Depression and Social Support**

A concept that is important to this study, and links the resilience and depression literature is *social support*. Important sources of social supports for individuals include close and caring relationships with parents and other competent adults, associating with prosocial peers, and connections to positive community assets such as clubs, religious groups and libraries (Masten and Powell, 2003). Similarly, several models used in the family resilience literature (McCubbin & Patterson, 1983; Olsen, 1993; Patterson, 2002) point to the importance of families tapping into resources both inside and outside of the family, which can include social support.

Studies on the relationship between social support and maternal depression have yielded mixed results, both in the depression literature and in other Rural Families Speak studies. For instance, results from Hammen's (2006) study of young women transitioning to adulthood suggested that depressed participants perceived receiving less social support than their friends actually reported providing to them. Conversely, Islam (2004) used the Rural Families Speak dataset and found that mothers with perceptions of high social support reported fewer depressive symptoms, and that social support acted as a moderator for participants who had maintained their marital status over time. Interestingly, Richards and associates (2002), found that participants with the lowest levels of depression perceived high levels of social support which had no strings attached (that is, no expectations of reciprocity). However, those with the highest levels of depression felt that social support came with strings attached. Brown, Brody and Stoneman (2000) reported in their study of rural black mothers that support from one's spouse was an important buffer for depression under conditions of significant socioeconomic risk. These

studies are consistent with classic research on the stress process (Pearlin, Menaghan, Lieberman, & Mullan, 1981) which suggests that social supports act to buffer depression indirectly by reinforcing self-concepts and are beneficial to those who need it most. The findings from Brown, Brody and Stoneman (2000), Hammen (2006), Islam (2004), and Ross and Mirowsky (1989), suggest that support received from a spouse, or other non-resident parent, is more effective for buffering depression than support received from social networks.

**Maternal Depression and Economic Risk**

The link between maternal depression and economic risk and strain has been well documented in the literature. In their review of the literature, Brown, Brody and Stoneman (2000) articulate some of the processes by which economic risk exacts its toll on depression in women. For instance, economic risk can result in undermining a mother's sense of parental efficacy, and can increase a woman's exposure to stressful conditions such as living in dangerous neighborhoods where housing for the family may be inadequate. Their research (2000) revealed interesting findings about the relationships between maternal depression, economic risk, and family dynamics. In their sample of rural Black women, maternal depression was strongly associated with difficult child conduct. However, that relationship was moderated by the family's level of economic risk. That is, under conditions of high economic risk, mothers' depression was strongly associated with difficult child conduct. When economic risk was low, however, the relationship between mothers' depression and child conduct was reduced to statistical non-significance. Even more interesting were their findings in regard to marital support, or more specifically, social support for childrearing provided by husbands. They found that marital support was not related to mothers' depression when economic risk was low, but was negatively related to mothers' depression when economic risk was high. That is, the parental

social support mothers receive from their husbands helps to buffer the relationship between mothers' depression and the strain they experience from economic risk.

In the context of welfare reform, the association between maternal depression and economic strain can be complex. For instance, self-reported maternal depressive symptoms have been shown to be associated with reduced or loss of welfare benefits and food stamps, food insecurity, and child health problems (Casey, Goolsby, Berkowitz, Frank, Cook, Cutts, et.al, 2004). Other studies have shown similar findings. For instance, several studies stemming from the Rural Families Speak project have found depression among rural mothers to be associated with food insecurity (Bulock, 2007; Olson, Anderson, Kiss, Lawrence, & Seiling, 2004), and perceived economic strain (Dolan, Richards, Sano, Bauer, & Braun, 2005).

One of the mechanisms by which economic risk and other life circumstances has been found to influence depression is through the subjective perceptions, or meanings, a person holds about his or her situation. Pearlin, Lieberman, Menaghan and Mullan (1981) eloquently described this mechanism in their classic development of the stress process model, "life events… lead to stress by adversely altering the meaning of persistent life strains" (p. 339). Dennis, Parke, Coltrane, Blancher, and Borthwick-Duffy (2003) presented an example of this mechanism in their study of low-income Latina mothers living in Southern California. In their sample, the objective indicator of having a low income was not directly related to depression in the mothers. Instead, the mothers' own subjective feelings about not having enough money to make ends meet were related to their levels of depression. Similarly, in a study stemming from the Rural Families Speak project, Dolan, Richards, Sano, Bauer, & Braun (2005) found that rural mothers' employment instability, along with their perceptions that their financial situation had declined over time, were associated with increased depression, whereas household income differences

over time were not associated with their depression levels. Because of these findings, it will be important in the present study to include indicators that both measure rural families' economic conditions objectively (e.g. household income, percentage of the poverty level, etc.), and measure rural mothers' subjective perceptions and meanings of their economic situation to understand the links between rural mothers' mental well-being and their families' well-being.

## Family Challenges in the Context of Welfare Reform

Heymann (2000, 2002) documented several risks working poor families across the country face, including low income, underemployment, health problems, child problems in school, child behavior problems, child disabilities, problems with transportation, and challenges with the work-life time crunch. Within the context of a global, 24-hour economy, low-income parents often must work irregular shifts to accommodate employers' needs, but lose time with their families and struggle to find adequate child care for off-peak hours. In addition, most low-income workers receive few basic benefits from their employers, such as health insurance coverage, vacation and sick time, and overtime pay. Thus many low-income workers are working long hours with little pay. They struggle to make ends meet, and to meet the physical and emotional needs of their families.

Lichter and Jayakody (2002) report that most welfare to work programs were developed from an urban-based context. However, working poor families in rural areas face unique challenges and risks compared to working poor families in urban settings. These challenges include isolation, limited employment (Braun, Lawrence, Dyk & Vandergriff-Avery, 2002) and educational opportunities, and poverty extended over longer periods of time (Ames, Brosi, & Damiano-Teixeira, 2003). Transportation can become a problem for rural families because most workplaces and childcare locations are separated by long distances from the family's home.

Many employers in rural areas do not provide basic benefit packages that include health insurance or vacation or sick time (Heymann, 2000 & 2002). Thus, the realities of rural life and the nature of welfare reform legislation may actually make it harder for poor families to make ends meet (Bauer, Braun & Olson, 2000; Cheng, 2002; Lichter and Jayakody, 2002).

Many of the mothers in the Rural Families Speak project reported that, while having a job helped their family's economic well-being to a point, many were still living in poverty and needed public assistance. Merely having a job did not make them economically self-sufficient (Braun, Lawrence, Dyk & Vandergriff-Avery, 2002). In addition, these authors' findings indicated that many families did not receive the assistance for which they were eligible (e.g., earned income tax credit, food stamps), and that eligibility varied by state. Another study from the Rural Studies Speak project found that child care challenges made finding and keeping a job difficult (Plumb & Braun, 2007). For instance, for low-skilled women with entry level jobs, the costs of child care were almost equal to their income, taking most of their earnings. In addition, it was often difficult to find available child care during non-standard work hours, such as nights or weekends.

However, poverty and associated economic hardships also are discussed in much of the literature on maternal depression as life events which trigger coping responses as well as strains (Brown, Brody & Stoneman, 2000; Casey, et.al., 2004; Coiro, 2001; Dennis, Parke, Coltrane, Blacher, & Borthwick-Duffy, 2003; Ennis, Hobfall & Schroder, 2000; Jackson, 1998, 1999; Jackson & Huang, 1998; Ross, 2000; Siefert, Heflin, Corcoran, & Williams, D. 2004; Taylor, Rodriguez, Seaton, & Dominguez, 2004). In these studies, mothers who tapped into social support resources reported fewer depressive symptoms. Consistent with the resilience framework, mothers' perceived social support and their perceptions of their economic situations

are conceptualized as resources that influence their well-being, which in turn influences the well-being of the family.

## The Rural Families Project Findings Related To Depression

This study uses data from the Rural Families Speak project, which is a multidisciplinary, mixed method, and longitudinal approach to developing an understanding of the challenges and complexities faced by rural low-income families within the context of their communities. Rural families are faced with limited employment opportunities and therefore higher poverty rates, limited educational and training opportunities, and difficulty maintaining dependable, affordable childcare and transportation (Bauer, Braun, & Dyk, 2003; and Findeis, Henry, Hirschl, Lewis, Ortega-Sanchez, Peine, & Zimmerman, 2001). Many of the studies stemming from the Rural Families Speak project have focused on factors related to the mental well-being of rural mothers in the sample, with depression being one of the most used indicators of maternal mental health. Though the studies are varied in design and methods, with some using a single wave of data for analyses and others using longitudinal designs, common themes have emerged in relation to maternal depression:

1). Mothers' perceptions of life satisfaction and confidence in their parenting ability (Bulock, 2004), and social support (Bulock, 2004; Bulock, in process; Islam, 2004; Garrison, Marks, Lawrence & Braun, 2004; and Kim, Seiling, Stafford & Richards, 2005) are associated with lower depression.

2). Food insecurity (Bulock, 2007; and Olson, Anderson, Kiss, Lawrence, & Seiling, 2004), tobacco use (Maring & Braun, 2005) and perceived economic strain (Bulock, in process; and Dolan, Richards, Sano, Bauer, & Braun, 2005) are associated with higher depression.

3). Employment status, especially continued employment status over time, is related to lower depression (Dolan, Richards, Sano, Bauer, & Braun, 2005; and Kim, Seiling, Stafford & Richards, 2005).

4). The relationship between low income and depression is mediated by mothers' perceived economic strain. That is, annual income relates to higher depression when mothers perceived more economic strain (Bulock, in process).

5). Stronger religious beliefs and faith community involvement is associated with lower depression (Garrison, Marks, Lawrence & Braun, 2004).

6). Inability to build resources during times of change is associated with higher levels of depression (Seiling, 2006).

7). Having experience with health care systems and more knowledge of depressive symptomotology is associated with the likelihood that rural low-income mothers' will self-report their depressive symptoms (Simmons, Huddleston-Casas & Berry, 2007).

## Summary of the Literature Review

This chapter began with a discussion of the theoretical frameworks used for this dissertation. Specifically, the resilience framework was compared with and tied to an ecological framework in two ways. First, connections were made between the human ecological approach (Bronfenbrenner, 1986, 1989, 1994, and as discussed by Tudge, Mokrova, Hatfield & Karnik, 2009) and the resilience approach at the individual level. Second, connections were made between the family ecological approach (Bubolz & Sontag, 1993) and the resilience approach at the family level. Rationale were provided for the use of this integrated framework for the study of resilience processes among rural low-income mothers and their families, as well as for the

study of the ways in which rural mothers' longitudinal depression patterns shape resilience processes.

The discussion then turned to the broad and complex nature of depression, describing vulnerabilities that are associated with depression, such as brain structures and mechanisms, cognitive and personality attributes, and interpersonal issues. The gendered nature of depression was then highlighted, particularly the ways that women are affected. The last sections outlined various correlates with maternal depression that are important to the present studies, such as parental confidence, social support and poverty. The chapter ended with an overview of findings from the Rural Families Speak study that are relevant to this dissertation.

The following two chapters present two manuscripts. The purpose of study 1 is to glean an understanding of the contextual influences on mothers' depression patterns over time. The purpose of study 2 is to understand which individual and family risk and resilience factors and processes were most relevant for each longitudinal pattern of depression.

# CHAPTER 3
# STUDY 1: PICTURES OF RESILIENCE AMONG RURAL LOW-INCOME MOTHERS: A MIXED METHODS STUDY


## Abstract

A mixed methods approach was used to explore variability in eighteen rural low-income mothers' longitudinal depression patterns. In addition, a resilience lens was employed to identify resilience processes adapted by the mothers and their families. Consistent with a concurrent triangulation design, quantitative analyses were conducted to place mothers within longitudinal depression patterns for subsequent in-depth analysis using grounded theory techniques. Similar themes emerged among all of the participants in the study. However, the *picture* of resilience expressed within these themes varied by depression pattern, as did the nature and the number of sources of stress and sources of strength. Findings highlight the complexity of resilience processes in the face of maternal depression among rural low-income women. Implications for policy and practice are discussed.



Keywords: maternal depression, stress, resilience, social support, perception, parenting

## Introduction

Major depression is the leading cause of disability in the United States (US Department of Health and Human Services, 1999), and it is twice as common in women (Kessler et al., 2003), especially those of child-bearing ages (18-45 years old) (Substance Abuse and Mental Health Services Administration, 2010). Mothers with young children seem to be especially vulnerable to depression (Mistry, Stevens, Sareen, De Vogli & Halfon, 2007; Zuckerman & Beardslee, 1987). Women play important roles in the nurturing and development of family members and the day-to-day management of family functioning. However, the capacity to carry out such roles is compromised when women experience depression. The child development literature has produced numerous studies on the relationship between maternal depression and poor child outcomes, such as poor child health (Casey, Goolsby, Berkowitz, Frank et. al, 2004), child disruptive behaviors (Gross, Shaw, Burwell & Nagin, 2009; Turney, 2011; and Mustillo, Dorsey, Conover & Burns, 2011), deficits in cognitive performance, and dysfunctions in behavioral regulation among infants and young children (for a more extensive review see Hammen, 2003).

Social science research has increasingly focused on the correlates and detrimental effects of depression in mothers, as well as some of the processes by which maternal depression is related to family dynamics. Most of the literature to date has examined maternal depression from a risk-only perspective. In addition, much of the research on maternal depression has been cross-sectional and quantitative. Consequently, less is known about the context of mothers' lives as they experience variability in their depression over time, and less is known about the complex interplay among individual and family risk and protective processes experienced in their families. This research employs a mixed methods design and a resilience perspective to explore

the context in which depression occurs in these mothers' lives, and to identify risk and resilience factors and coping mechanisms mothers and their families develop to off-set the demands related to mothers' longitudinal depression patterns.

**Resilience Framework**

This study employs a resilience approach to studying individuals and families. Currently individual and family resilience are seen as two separate frameworks with separate literature bases and lines of research, although family researchers borrow concepts and constructs from individual resilience research. Family resilience is a systems level framework, yet family systems are made up of individuals whose health, attitudes and development contribute to whole family system functioning.

While family has been conceptualized as both a risk and a protective factor influencing individual resilience (see several chapters of Luthar, 2003), less is known about the influence of the individual on family resilience (Hawley & DeHaan, 1996). In addition, studies of individual risk and resilience have focused on child and adolescent development (see several chapters of Luthar, 2003; Clark & Clark, 2000; Felsman, 1989), or on adult outcomes of adolescent risk experiences and resilience processes (Higgins, 1994; Quinton, Rutter & Liddle, 1984; Rubin, 1996). In order to make a better link between the two frameworks, it is important to understand how resilience takes shape within adults in families and how their resilience may be related to family level development. Therefore, this study brings these two lines of research together as a cohesive and comprehensive resilience framework. Given the pivotal role mothers play in families, it makes sense to begin linking individual and family resilience frameworks with a study of mothers and how their individual resilience relates to family resilience in the context of rural poverty and welfare reform.

Similar to Conger and Conger (2002), this study will adopt the broad definition of resilience proposed by Luthar, Cicchetti and Becker (2000) to conceptualize resilience at the individual and family levels: "Resilience refers to a dynamic process encompassing positive adaptation within the context of significant adversity." (p. 543). In addition to being applicable to resilience at multiple levels, this definition is important because it implies two conditions by which an individual or family could be deemed resilient. First, there has been exposure to significant adversity, and second, an achievement of positive adaptation, or competent functioning and development has been reached, despite the exposure to risk (Hawley and DeHaan, 1996; Luthar, Cicchetti & Becker; Patterson, 2002a, 2002b). Individuals and families face varying risks, possess varying personal or family-level attributes, and have access to a variety of support resources. In addition, resilience processes occur over time and within a developmental context. Thus, within the context of adversity, individual and family functioning varies across developmental and family function domains (Luthar, Cicchetti & Becker, 2003; Patterson, 2002).

**The Importance of Perception**

In addition to concepts of risk and resilience and adaptive processes, two other concepts link the individual and family literature sets, and also link with literature on depression. The first is the concept of *perception*. Literature on individual resilience has found that positive self-perception (competence, worth, confidence, and self-efficacy) and positive outlook on life (hopefulness, belief that life has meaning, and faith) is associated with positive outcomes (Masten, 2001; Masten & Powell, 2003). Similarly, several models of family stress and resilience processes highlight the important role of family perceptions of situations and family meanings for positive adaptation to adversity (Lavee & Olson, 1991; McCubbin & Patterson, 1983; Patterson, 2002). Cognitive theories of depression point to the importance of perception

for influencing the way negative life events are interpreted and acted upon (Abramson & Alloy, 2006; Joormann, 2009). Perceptions influence the way individuals filter information from the environment and develop schemas about life (Joormann, 2009). Such schemas influence whether life circumstances are viewed as hopeless (Abramson, Metalsky & Alloy, 1989), or as areas for improvement, which would be consistent with an adaptive (resilient) outlook. Thus, it is clear that perceptions play a key role in the ability to "bounce back" from crisis.

**Social Support Matters**

The second concept that is important to this study, and links the literature sets is *social support*. Important sources of social support for individuals include close and caring relationships with spouses, parents and other competent adults, associating with prosocial peers, and connections to positive community assets such as clubs, religious groups and libraries (Masten and Powell, 2003). Similarly, several models used in the family resilience literature (McCubbin & Patterson, 1983; Olsen, 1993; Patterson, 2002) point to the importance of families tapping into resources both inside and outside of the family.

Studies on the relationship between social support and maternal depression have yielded mixed results, both in the depression literature and in other Rural Families Speak studies. Interpersonal vulnerability theories of depression are informed by Bowlby's theory of attachment, which posits that humans need to maintain a relatedness with others for survival (Bell, 2009). From the interpersonal vulnerability perspective, individuals' attachment cognitions have been shown to be associated with both their perception of social support and enacted social support (Herzberg, Hammen, Burge, Daley, Davila & Lindberg, 1999). For instance, results from Hammen's (2006) study of young women transitioning to adulthood

suggested that depressed participants perceived receiving less social support than their friends actually reported providing to them.

Islam (2004) used the Rural Families Speak dataset and found that mothers with perceptions of high social support reported fewer depressive symptoms, and that social support acted as a moderator for participants who had maintained their marital status over time. Interestingly, Richards and associates (2002), using Rural Families Speak data, found that participants with the lowest levels of depression perceived high levels of social support which had no expectations of reciprocity. However, those with the highest levels of depression felt that social support came with strings attached. Brown, Brody and Stoneman (2000) reported in their study of rural black mothers that support from one's spouse was an important buffer for depression under conditions of significant socioeconomic risk. These studies are consistent with classic research on the stress process (Pearlin, Menaghan, Lieberman, &Mullan, 1981) which suggests that social supports act to buffer depression indirectly by reinforcing self-concepts and are most beneficial to those who need it most. The findings from Brown, Brody and Stoneman (2000), Hammen (2006), Islam (2004), and Ross and Mirowsky (1989), suggest that perceived support received from a spouse, or other non-resident parent, is more effective for buffering depression than support received from social networks.

**The Present Study**

The present study is guided by two research questions. First, "What accounts for the depression patterns of rural low-income mothers over three waves of data collection?" Second, "How do mothers' perceptions, social supports, risks and the other contextual circumstances in rural mothers' lives differ when comparing mothers in each of the six depression categories?"

## Method

Data from the Rural Families Speak project were analyzed for this study. Rural Families Speak was a multi-state project which employed a multidisciplinary, mixed method, and longitudinal approach to develop an understanding of the challenges and complexities faced by rural low-income families within the context of their communities. See Bauer (2004) and Bauer and Dolan (2011) for more background information about Rural Families Speak project.

### Sample

A purposive sample was selected for the Rural Families Speak study due to the difficulty in obtaining a consistent multiple state random sample of rural low-income, highly mobile families. Most states recruited participants through agricultural extension education programs for low-income families. To be included in the study, it was required that each family have at least one child 12 years old or younger living in the home. Families also had to be eligible for, but not necessarily receiving, Food Stamps or the Supplemental Nutritional Program for Women Infants and Children (WIC) at the time of the interviews, or have a poverty ratio less than 200% of the poverty level limit. The sample included participants from four states in the Eastern region, five in the Central region, two in the Southern, and four in the Western region. Compared to poor rural families nationwide, the Rural Families Speak sample had a higher proportion of rural Latino(a) families (17%), a lower proportion of White families (69% ), and a lower proportion of rural Black families (6% ). Native American families (n=2, 0.9%) were not targeted for recruitment due to complicated circumstances regarding tribal benefits and services.

The Rural Families Speak sample included 433 participants for wave one, 326 participants for wave two, and 271 for wave three. Attrition among those in the sample occurred for several reasons. One state dropped from the study before wave two data were

collected. Some participants from wave one did not meet the sampling criteria to be interviewed for wave two (they were no longer eligible to receive assistance, their incomes rose above the 200 percent poverty limit, or their youngest child matured over the 12 year old age limit). Last, many participants could not be contacted for subsequent interviews because they had moved.

The sample for the present study was selected in two steps. First, the sample was limited to mothers who participated in all three waves of data collection (N = 223) so that longitudinal depression patterns could be studied. Table 3.1 describes the sample at the first step. The second step involved selecting cases from each depression pattern (described in more detail in analytic approach, step two).

Table 3.1 Demographic Variables Characterized By Rural Mothers' Depression Patterns

| | Low<br>*n* = 75<br>*% (n)* | Moderate<br>*n* = 25<br>*% (n)* | High<br>*n* = 14<br>*% (n)* | Improving<br>*n* = 48<br>*% (n)* | Worsening<br>*n* = 34<br>*% (n)* | H-L-H<br>*n* = 27<br>*% (n)* |
|---|---|---|---|---|---|---|
| Age<br>*M (SD)* | 31.2 (8.2) | 29.1 (6.8) | 31.6 (7.4) | 29.6 (7.0) | 30.2 (7.0) | 32.6 (7.1) |
| Education | | | | | | |
| High school & less | 30.6 (22) | 9.7 (7) | 6.9 (5) | 26.4 (19) | 16.7 (12) | 9.7 (7) |
| More than high school | 34.0 (48) | 12.1 (17) | 5.7 (8) | 19.9 (28) | 15.6 (22) | 12.8 (18) |
| Ethnicity | | | | | | |
| White | 30.7 (47) | 10.5 (16) | 7.8 (12) | 20.9 (32) | 16.3 (25) | 13.7 (21) |
| Hispanic/Latino | 40.6 (13) | 12.5 (4) | 0 | 21.9 (7) | 15.6 (5) | 9.4 (3) |
| African American | 33.3 (5) | 26.7 (4) | 0 | 26.7 (4) | 6.7 (1) | 6.7 (1) |
| Other | 40.0 (6) | 0 | 6.7 (1) | 33.3 (5) | 20.0 (3) | 0 |
| Marital status | | | | | | |
| Single | 31.5 (17) | 11.1 (6) | 7.4 (4) | 20.4 (11) | 16.7 (9) | 13.0 (7) |
| Married | 39.0 (32) | 7.3 (6) | 4.9 (4) | 23.2 (19) | 12.2 (10) | 13.4 (11) |
| Living w/partner | 22.9 (8) | 17.1 (6) | 5.7 (2) | 34.3 (12) | 14.3 (5) | 5.7 (2) |
| Divorced | 31.0 (9) | 13.8 (4) | 6.9 (2) | 17.2 (5) | 17.2 (5) | 13.8 (4) |
| Separated | 33.3 (5) | 13.3 (2) | 6.7 (1) | 6.7 (1) | 33.3 (5) | 6.7 (1) |

**Data Collection**

The project collected three waves of quantitative and qualitative data from 24 counties in 14 states. Protocols for each wave were approved by research ethics boards for each participating site, and participants provided informed consent for each wave. Trained interviewers in each state used semi-structured protocol to conduct interviews face-to-face with the woman in the family for about two hours. Quantitative data included demographic, financial and employment information, as well as information on the number of health and mental health problems in the family and their access to health insurance and health care. Instruments included the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977); the Parenting Ladder (Richards, 1998); and the Core Food Security Module (Hamilton et al., 1997).

Qualitative protocol included open ended questions designed to probe more detailed information about participants' responses to the quantitative questions. For instance, when asking mothers about their employment status, interviewers also would ask whether anything or anyone made it more difficult for the mother to work. Likewise, after completing the CES-D and the Parenting Ladder, interviewers would ask mothers to elaborate on items of interest. For example, mothers were asked to rate themselves on the Parenting Ladder in terms of "your overall satisfaction with the amount of support in your life," after which interviewers asked the mothers to explain why they rated themselves that way. The interviews were tape-recorded and later transcribed for data analysis.

**Analytic Approach**

Although the data for the larger Rural Families Speak study and for this study were collected consistent with a concurrent design, the analysis for this mixed methods study was conducted in three steps, and was more consistent with a sequential explanatory design (Creswell

& Plano Clark, 2007; Creswell, Plano Clark, Gutmann, & Hanson, 2003) in that quantitative analyses were conducted (in the first two steps) in order to characterize mothers according to longitudinal depression patterns. These results were then "used to guide the purposeful sampling of participants for a primarily qualitative study" (Creswell, Plano Clark, Gutmann, & Hanson, 2003, p. 227). That is, mothers from the sample described above (N = 223) were each placed within a longitudinal depression pattern, and then a subsample was selected from each pattern for in-depth qualitative analysis (step three).

**Step One.** Maternal depression was measured using the Center for Epidemiologic Studies Depression Scale (CES-D), which was designed to measure symptoms of depression in the general public (Radloff, 1977). Studies testing validity have shown that the CES-D is highly correlated with other measures of depression (Radloff, 1977). The 20-item inventory has a reported high internal reliability, with Cronbach's alpha of 0.82 (Radloff, 1977). Cronbach's alpha for the current sample (N = 223) is 0.89. For the first step in the quantitative analysis, mothers' depression scores for each year of data collection were coded into four categories according to Seligman's recommendation (1998).

Table 3.2. Number Of Mothers In Each Depression Category

| Depression Category | Depression score range | Wave 1 *n* = 223 (%) | Wave 2 *n* = 223 (%) | Wave 3 *n* = 223 (%) |
|---|---|---|---|---|
| Nondepressed | 0-9 | 59 (26) | 83 (37) | 85 (38) |
| Mildly depressed | 10-15 | 51 (23) | 61 (27) | 52 (23) |
| Moderately depressed | 16-24 | 62 (28) | 49 (22) | 42 (19) |
| Severely depressed | >24 | 51(23) | 30 (14) | 44 (20) |

Table 3.2 reflects the changes occurring in depression over time in an aggregated sense. When looking at changes across the whole sample, it appears that the number of mothers with no depression increased, and the number of mothers with moderate or severe depression decreased.

**Step Two.** The above step allowed for comparisons of the levels of depression across all three years for the sample. However, this snapshot is more complicated when comparisons are made across all three years for each mother. Such comparisons led to the emergence of longitudinal depression patterns. That is, upon examining depression at each wave for each mother, it became clear that depression levels varied greatly for many mothers each year. Therefore, in the second step of the quantitative analysis, each mother was placed into one of six longitudinal "depression patterns":

- "Stable low" pattern consisted of mothers who reported depressive symptoms consistent with categories one and two (nondepressed and mildly depressed), and who remained in those low categories across time (low → low → low) ($n$ = 73).
- "Stable moderate" pattern consisted of mothers who reported depressive symptoms in the moderately depressed range over time (mod → mod → mod) ($n$ = 15).
- "High depression" pattern consisted of mothers whose depression remained in the severely depressed category all three waves (high → high → high) ($n$ = 13).
- "Improving depression" consisted of mothers who experienced high levels of depression the first wave, but reported much lower symptom levels by the second and third waves (high → low → low) ($n$ = 48).
- "Worsening depression" consisted of mothers experiencing few depressive symptoms during the first wave, but more severe depressive symptoms over the next two waves (low → high → high) ($n$ = 34).

- Finally, for some mothers the pattern was "erratic", such that the reported symptom levels changed dramatically each year of data collection (high → low → high) ($n$ = 28).

An additional seventh pattern was identified that was also erratic (low → high → low), however upon closer inspection of each mother ($n$ = 13), the depression scores for each wave did not differ as dramatically as the erratic pattern described above. The majority of participants fitting this pattern had scores that remained in the mild to moderate range over the length of the study. Therefore, mothers in this depression pattern were included with mothers in the "stable moderate" pattern (making that subsample $n$ = 28).

This step in the analysis raised many questions about the nature of the mothers' depression patterns and how they looked in the context of mothers' lives. It was important at this juncture to understand the mothers' stories which might shed light on the longitudinal patterns that emerged from the data.

**Step Three.** The third step involved qualitative analysis of three cases from each of the depression patterns (final $n$ = 18 cases total). Extreme cases in each pattern were selected in order to gain an understanding of the contextual differences in the depression patterns, and to observe differences in risk and resilience processes across the patterns. Guided by the research question and conceptual framework, comparing and contrasting multiple cases within and across the patterns can "strengthen the precision, the validity, and the stability of findings" (Miles and Huberman, 1994, p. 29). Thus, for each pattern, cases were selected based on extreme depression score values. Mothers with the consistently lowest depression scores were selected for the low depression pattern. Mothers with the consistently highest depression scores were selected for the high pattern. For the improving, worsening and erratic patterns, mothers were

selected for the extreme differences in depression scores across all three waves, according to their pattern.

Themes from the analyses will be presented, with the goal of providing an understanding of the risk and resilience processes and the variability in depression patterns among rural low-income mothers. For each case, the mothers' transcripts for all three years were analyzed. Thus a total of 54 transcripts were coded and analyzed (three mothers X six depression patterns X three transcripts) using MaxQDA software (Belous, 2007). The objective of the qualitative analysis was to employ a grounded theory approach (LaRossa, 2005) to gain an understanding of the context in which these patterns occur, and the ways in which those patterns relate to family relationships, functioning, and meanings, as well as risk and resilience processes.

First, open coding was conducted of all transcripts using the variable-concept-indicator model. An indicator is a word, phrase, or string of words and phrases in the data (e.g., "...you just kind of keep looking the positives"). A concept is the label or code that is assigned to represent indicators that are theoretically similar (e.g., positive perspective, parenting strengths, stressful relationships). The constant comparative procedure outlined by LaRossa was applied during open coding, linking indicators to concepts, and to each other until the concepts were theoretically saturated.

The next step was axial coding. According to LaRossa (2005), this step involves the discovery of relationships among concepts and creating higher level categories that pull the data together, such as *Primary Sources of Stress* and *Primary Sources of Strength*. Axial coding allows for the exploration of categories and determining their properties and dimensions. It was during axial coding that specific relationships emerged between the higher level categories and each depression pattern.

Last, selective coding was done to "decide the main story underlying the analysis" (LaRossa, 2005, p. 850). Similar to axial coding, selective coding involves the identification of a core variable. However, according to LaRossa, the core variable "is a variable that has 'analytic power' because of 'its ability to pull the other categories [variables] together to form an explanatory whole" (p. 851). During this analytic process, *Pictures of Resilience* emerged as the core variable that pulled the concepts and categories together.

## Findings

Across all three waves of data similar themes emerged among all of the participants in the study ($n$ = 18). However, the *pictures of resilience* expressed within these themes varied by depression pattern, as expressed in the higher level categories *sources of stress* and *sources of strength*. Thus the resilience process for women in the "stable low" pattern looked very different from those in the "high depression" or the "worsening depression," even though some of the same themes were present. For comparison's sake, a table of themes (Table 3.3) for each pattern is presented, followed by a presentation of findings which helps to provide a context for understanding how the *picture* of resilience processes varied for each depression pattern.

Table 3.3. Primary Themes for Each Depression Pattern

| | Stable Low | Stable Moderate | High Depression | Improving Depression | Worsening Depression | Erratic Depression |
|---|---|---|---|---|---|---|
| Primary Sources of Stress | • Financial strains<br>• Negative life events | • Negative outlook<br>• Stressful relationships<br>• Financial strains<br>• Low perceived access to social support | • Pile-up of health problems<br>• Financial strains<br>• "Getting the run-around"<br>• History of abuse<br>• Stressful relationships | • Negative life events<br>• Financial strains<br>• Health problems | • Pile-up of health problems<br>• Financial strains<br>• "Getting the run-around"<br>• Lowest amount of social support | • Health problems<br>• Financial strains<br>• Stressful relationships<br>• "Getting the run-around" |
| Primary Sources of Strength | • Positive perspective<br>• Parenting strengths<br>• Perceived family strengths<br>• Resourceful partner/spouse<br>• Social support | • Parenting strengths<br>• Permanent employment | • Parenting strengths<br>• Positive perspective<br>• Perceived family strengths<br>• Informal social supports | • Social supports<br>• Positive perspective<br>• Investing in self<br>• Perceived family strengths | • Positive perspective<br>• Parenting strengths | • Positive perspective<br>• Parenting strengths<br>• Investing in self<br>• Social supports<br>• Perceived family strengths |

**"Stable Low" Depression**

The women who reported no depression or mild depression across all three waves reported the fewest number of risk factors, but when specific risk factors are considered, they reported a higher number of negative life circumstances than most of the other women, and they also reported a high level of perceived financial strains. For instance, Reba's story (age 34) provides a good example of how negative life events and financial strains can compound stress. The combination of facing bankruptcy and losing many cows to an unknown disease put them in danger of losing their farm and their home:

> *In June we were getting real desperate. Didn't have hardly any food left. We had a beef butchered at the locker but we were unable to get [it] 'cause we just didn't have the funds. . . We had lost a lot of cows …We had lots of tests run and vets could never really confirm why our cows died so our milk took a real plummet 'cause we'd lost about 18 head at that time. That really took a big chunk of our income so…when the milk check came, there wasn't anything left. By the time they took it out for our payments, we had about $28 to our name, and $28 isn't gonna buy groceries. It's not gonna pay our electric bill, and our telephone bill. So we went to see a lawyer and he thought that staying on the farm might be our best option. It's almost like, at that point, it's really hard 'cause you can't get in and you can't get out.*

In spite of such difficulties, the women in the *stable low* pattern reported the second highest number of protective factors. These protective factors were active tools the women used to work through current stressors or move on from past ones. For example, they were more likely to have a *positive perspective* about their lives and were likely to look ahead. Joelle (age 37) explains why, despite being abused by former partners, she is satisfied with life with her two children and plans for move forward:

> *I'm happy with what my kids are doing. We are healthy. I'm planning to go back to school, I'm excited about that. . . considering where I've come from, where my daughter was a year ago, where I was a little over a year ago, I feel that we're in a good place right now, and we're stable.*

By the third year of the study, Joelle had put her plan in place. She was taking college courses and training for a new job. Her daughter graduated from high school, and her son was in Head Start while she worked. Both children were developing normally. She took an active role in moving her life forward from past stressors.

The *stable low* women perceived parenting strengths in themselves and in their partners, and talked about family strengths more than women who were depressed. They were likely to perceive receiving social support from their husband or partner, and were likely to tap into other informal and formal support systems. One of the most interesting findings was that the two married women from this depression pattern perceived their husbands to be very resourceful when it came to finding extra sources of income. For example, despite disabilities that kept him from holding a permanent job, Jillian (age 40) was proud of her husband, who painted houses, mowed lawns, and cleaned gutters. He also bought broken lawn mowers, computers, and other household appliances, and then fixed and sold them. This perception of resourcefulness in their husbands seemed to be associated with their perceptions of spousal support and a sense of working together to persevere through their stressful situations.

**"Stable Moderate" Depression**

The women in the *stable moderate* depression pattern reported the fewest number of primary stressors, but also reported the fewest number of primary strengths. Their resilience processes differed greatly. Of all the depression patterns, the women in the *moderate* pattern appeared to have a negative outlook on life. When asked if they were satisfied with life, they were more likely to report having mixed feelings. Two of the women (ages 22 and 23) were new mothers; their children were infants at the time of the first interview. It is possible their mixed feelings could be attributed to postpartum depression. However, their outlook remained the

same across all three waves, even when life circumstances appeared to improve. For example, by the third year of the study, Louanne (age 22) had graduated from college with a registered nurse degree and had a better paying job. She had reunited with her partner and planned to get married. Interestingly, Louanne also reported a low level of social support for parenting. She felt as if she was *"doing this all alone,"* even though she also reported that she got together with friends regularly and received parenting advice from family members.

For one woman in the *moderate* pattern, cultural values may have played a role in her outlook on life and her perceptions of social support. Tomasa (age 32) originally came to the study as a migrant worker of Mexican origin. Her home was in a southern state, but she migrated north each year with her immediate and extended families. By the second year of the study she and the rest of her family had secured permanent jobs, so they no longer migrated. In fact, Tomasa received training to become a certified nurse assistant, which was funded by her employer. Despite new opportunities and an improving financial situation, Tomasa reported feeling unhappy and often lonely, and she had a lower perception of social support. As she explains:

> *It feels like when you migrate, you're closer to your family… Most of the time … we're all working in the same group together, and then even though we didn't pick together, we were in the same field, you know?… And here, I just get to see my mom like in the mornings before I go to work, just for her injection, and then when I'm coming back from work, I stop by and give her her injection because she's going in for work, so we hardly get to see one another.*

Thus, for Tomasa, even though she still was able to see her mother briefly every day, it was not enough to fulfill her need for family togetherness, a Hispanic cultural value. Missing her family appeared to be associated with her sense of resilience.

**"High" Depression**

The women in the *high* depression pattern consistently reported depression scores above thirty each year. These women reported among the highest number of stressors. They each had multiple health problems that seemed exacerbated by the frustration they felt when trying to get their needs met through social service and health care agencies. Zola (age 45), for example, was married with two children, and was extremely limited in her ability to participate in any activities with her family. She had a "pile-up" of health problems, including emphysema, inflammatory bowel disease, and carpal tunnel syndrome. Most stressing of all, she suffered from arthritis in her neck and herniated discs in her spine which caused headaches and continuous neck, back and leg pain, and which caused leg fatigue. Because of all her health problems, she had several physicians that she needed to see on a regular basis; however the family car broke down, making it difficult to get to her appointments. Despite all her health problems, Zola had difficulty qualifying for disability benefits to help support her family, as she explains, *"Because there's not one doctor that will stand up in court and state it. They'll write it on paper but they won't state it."* Neither Zola nor her husband could work (he also had disabilities), so they did not have the money to fix their car. Their only sources of income were through welfare benefits. Having Medicaid further exacerbated her problems because many physicians would not accept it.

Each woman included in this study with a *high* depression pattern was involved in stressful relationships with someone close to her during at least one of the interviews, and had a history of being abused by a previous partner. Two of them also were abused as children. All three of the women reported that their children were currently experiencing behavior issues, such as anger problems. One woman experienced so much depression and emotional strain that by the

second year of the study she felt she could no longer be an effective parent. She relinquished custody of her children to foster parents.

Based on these examples, it makes sense to evaluate these women and their families as maladaptive. However, there were glimpses of resilience processes in their stories. For instance, the women exhibited parenting strengths. They sought services for their children's behavior problems, and poured a lot of attention and time into them. One thing Nan (age 42) worked to instill into her children was a value of serving others. She proudly reports:

> *My son will go and shovel my neighbor's (driveway) because she's elderly, and if he sees her pull up, he will drop what he's doing and run over and help her with her packages. And see, they want to pay him, but I tell my kids it's about the feeling that you get for helping that's more payment than what you could put money on. So they like that. I'm just trying to put different values in them.*

Even the woman who gave up custody of her children had their best interest in mind. She felt protective of them and recognized she could no longer be an effective mother. She took the initiative to find foster parents that she felt would be loving to her children. In addition, when she talked with them, she felt it was important to give her children permission to be happy with their new families.

Despite their frustrations with formal support systems and health issues, the women in this pattern viewed other areas of life positively. They held on to hope that their lives would get better, and sometimes even reported that they were very satisfied with life. They also were likely to perceive their families as strong, as Zola and her husband report, *"we ourselves have gotten closer as a family…We've gotten stronger as a family."*

**"Improving" Depression**

The women in this depression pattern reported very high levels of depression in wave one, and then much lower levels in the second and third waves. The high levels of depression

they experienced that first year of the study were associated with a constellation of stressors revolving around one significant negative life event. By the second interview, the women had resolved the negative life event so that the issue was no longer an influence on their lives, and the rest of the stressors seemed to diminish in importance or disappear. For example, in wave one Kami (age 35) experienced severe financial strain, food insecurity, and health problems, but this all seemed to revolve around a distressed marriage. Her husband did not contribute his income to supporting the family*: "When the baby needed diapers, he spent it on the truck and car and I had to get the money somewhere."* By the second year of the study she had divorced her husband, and the food insecurity and health problems resolved themselves. Her financial strains were diminished because she obtained a job to support her family, and because she tapped into her parents for social support.

Social support from parents, other family members, and neighbors and friends from the community were very important for helping the women in the *improving* depression pattern to actively resolve the main negative life event. These women built solid networks of support, such that they had several sources to which to turn. Shakira (age 47), an African American single mother with four children living at home and two adult children (not living at home), had an extensive social network available to her on a daily basis, including her adult children, her mother, extended family members, neighbors, and church members. This social support network became very important when Shakira's house burned down the day before Christmas one year. There was an outpouring of giving from her support system and from local formal support systems, such as the Red Cross and her children's school, to find her a new place to live and to replace necessities that were lost in the fire.

The women in this pattern also maintained a positive perspective on life and parenting. For example, Gabby was a 38 year old single mother in wave one who was raising three boys. Her oldest son had developmental delays, along with behavior problems that caused legal trouble. When Gabby was asked about any challenges to being a parent, she replied, *"There's not really much challenges…with my oldest one, that's not a challenge, that's just part of life that we had to get through…Right, it comes with the territory."* Rather than ruminating about the difficulties of parenting a developmentally delayed child, she chose to view it as being a part of the job that a parent works through.

The women also were likely to perceive their families as strong, close, and "there for each other," and they were likely to invest in themselves, by taking classes, going through training programs for work, or by signing up for parenting educational programs. These women actively pursued resources that helped them resolve the major negative life events that contributed to their depression symptoms in the first year.

**"Worsening" Depression**

The women in the worsening depression pattern had no symptoms or mild depressive symptoms the first year of the study, but experienced increasing symptoms each subsequent year. Similar to the women in the *high* depression group, the women in this group had severe or multiple health problems, which affected their ability to work, which also was associated with financial strains. In addition, there was a high level of frustration or distrust with social service systems. Trinity, a single, 39 year old mother of several children, explains her frustration when she tried to attend a class that was run by a county social services agency on how to develop a resume:

> *…they [the County] sent me to these classes which I thought were the biggest joke…I said I'm here because I need help getting a job, I'm not here to talk about*

*my feelings because my feelings aren't going to help me get a job. I want to know how to write a really good resume. I want to know where I can get the skills that I need …. 'Well this is the way we run the program' and I said it was a stupid program…I said this is a waste of my time…I'm paying out day care so I can come and learn something and nobody's teaching me anything.*

Similar experiences among each of the women in the worsening depression pattern, along with health and financial problems were associated with an escalation of depression symptoms over time. The women in this pattern also reported the fewest sources of social support. Soliel (age 29) provided an interesting example. During the second interview she described several instances where others (including her current husband) provided both emotional and instrumental support for her, but when asked about her level of satisfaction with the amount of support in her life, she indicated not feeling well supported because she did not feel her children were well supported: *"You know, I think if they had more support I would feel more supported."* Upon further elaboration, Soliel referred to relationship stresses she had been experiencing with her current husband and with an ex-partner (her oldest son's father).

Resilience processes leaned toward maladaptation for the women in the worsening pattern. However, bonadaptive processes were evident, particularly the ability to maintain a positive perspective. As Trinity explains, *"I mean there's good days, there's bad days. But I guess overall I'd say yeah...you just kind of keep looking the positives. I mean the kids are clothed. I got a place to live. Got a car that runs most of the time. You know…I've got a boyfriend, that's very happy."*

Another source of strength was the enjoyment they felt with being a mother. Soliel expressed this sentiment well*, "[I enjoy] getting on their level...Being a kid again with them! [chuckles] … I love them. [laughs] I love them a lot. Um, I think I'm a really good mom, I'm really protective, I know what they should and should not do. I know what we should and should*

*not do."* It was important for the women to hold on to these positive aspects of being a parent to help them endure the stresses in their lives.

**"Erratic" Depression**

Similar to women in the *high* and *worsening* depression patterns, primary stressors for two of the women in the *erratic* pattern could be characterized by a pile-up of health problems that prevented them from working and limited the activities they could do with their children. Also similar to the *high* and *worsening* patterns, there seemed to be an interrelation between multiple health problems, financial strains, and experiencing frustration with social service and health care agencies. Increasing problems in one area seemed to exacerbate frustrations in the other two areas. The women in the *erratic* pattern also were likely to have at least one stressful relationship with someone close, which seemed to be associated with their depressive symptoms.

Although the stressors continued across all three years for the women in this pattern, they all experienced a "dip" in their depression scores for wave two. That is, their depression scores were high the first year, dropped to the mild depression range (below 16) in the second year, and soared to above 40 in the third year. One possible explanation is that a family transition occurred for two of the women between the first and second year. For instance in wave one, Abiona, an African American, 34 year old mother with a partner and five children, was pregnant with her sixth child. It may be that the anticipation of another mouth to feed, on top of health and financial stresses and frustration with social services, made her feel further stressed, contributing to her high depression score. By the second interview, Abiona and her family may have adjusted financially and emotionally to the addition of a new family member. However, by the time of her third interview, her back and other health problems worsened, and her relationship with her

partner was tentative, because he moved out of the house. Her depression score spiked to high levels.

The transition that occurred in Steph's family was more unconventional. Steph and her husband are older (49 years old). They have a ten year old daughter that they adopted, and other grown children who no longer live with them. During the first year of the study, the couple gained custody of two of their grandchildren because they were being neglected by their parents. The uncertainty of raising two children with developmental delays, along with a myriad of Steph's health problems may be associated with her elevated wave one depression levels. By the second year, the family had settled into a routine, and all three children (their daughter and the two grandchildren) were in school all day. Steph felt as if she had gained some normalcy and time with her husband, and she very much enjoyed raising her daughter and grandchildren. In the third year, Steph lost custody of the grandchildren to her son, who had been released from prison. She described a sense of loneliness and boredom with the children gone. The number of health problems she experienced, along with her depression symptoms increased dramatically.

For one woman in this pattern the primary stressor seemed to be the relationship she held with her parents. Sancha was a 26 year old single mother of one child, and she was of Mexican origin. She was very proud that she had gained independence, and that she and her daughter lived on their own. She enjoyed being a mother and spending time with her daughter. Additionally, she loved working as a teacher's aide, and was taking college courses to become an elementary teacher. She had a sense of pride in accomplishing all of that on her own. However, she had a difficult relationship with her parents. She relied on them to help take care of her daughter when she had to work. They were happy to do this, but at the same time, they treated

Sancha poorly. She indicates, *"My parents try to help, but sometimes it's hard, they criticize... they make a lot of fun of me. Even my dad does…[I] can't get away from them."*

It may be that her search for independence was perceived by her parents as a threat to the Hispanic cultural value of family togetherness, and their criticism of her was as a way of exerting control to keep her from straying too far. Another example of an attempt to control her is evident from the third year (when her depression level spiked again):

> *"Um, I started um, dating someone they didn't like…So they started getting mad at me and talking about me…And saying that she (her daughter) was here in the house and seeing things that she's not supposed to and they started talking to people. I found out by third sources that they were saying that they were going to take her away from me."*

The second year "dip" in depression scores in Sancha's case may be explained by her engaging in new sources of social support. She gained new friends in her college courses and at work. Additionally, she began jogging regularly with a friend. Engaging in new activities with new friends seemed to boost her confidence, and combined with school successes, provided a sense of accomplishment.

## Discussion

The intent of this mixed methods research was to explore longitudinal depression patterns identified among rural low-income mothers and to gain an understanding of individual and family resilience processes within those patterns. Upon examining the higher level categories (*sources of stress* and *sources of strength*) with their subthemes and comparing across depression patterns, it became clear that even though the same themes were present across patterns, the resilience processes looked very different for each pattern. The core variable, *pictures of resilience*, emerged because it captured the essence of how resilience processes differed among

each of the depression patterns. For each pattern, the interplay between the *sources of stress* in the women's lives and their *sources of strength* took on different characteristics. Such differences and nuances about individual and family resilience processes are lost when data are aggregated and de-contextualized.

Models of individual resilience (Luthar, Cicchetti & Becker, 2000) and Patterson's Family Adjustment and Adaptation Response (FAAR) Model (2002) propose that outcomes of a resilience process result in either *bonadaptation* (positive adaptation) or *maladaptation* (negative adaptation). However, because development is a continuous process, an individual's or family's resilience outcome is relative to the point in time in which development is assessed (Patterson, 2002). That is, a person (or family) could emit evidence of maladaptive development in adolescence, yet positive development ten years later. For the present study, any determination of a resilient outcome was based on data from the third wave of interviews, the last point at which rural mothers and their families were assessed.

For the women in the three maladaptive patterns, *high, worsening,* and *erratic* depression, each source of stress appeared to exacerbate the others, which became overwhelming for each of them. Space precludes including all the examples, however the overall experience of analyzing transcripts from these three patterns gave the impression that these women were caught up in a swirling vortex of unbearable stressors. Yet the women in these patterns were intentional in their attempts to engage inner sources of strength (e.g., positive perspective, parenting strengths) and tap into external sources (e.g., social support) in order to nurture their families. This metaphor of a "swirling vortex" highlights the additive and interactive process nature of resilience, compared with past studies that employed a pile-up-of-stressors metaphor (McCubbin & Patterson, 1983).

This metaphor also provides a visual reminder of how difficult it can be for families facing significant adversity to move forward.

The women in the two bonadaptive patterns, *stable low* and *improving depression*, and their families also faced serious adversities in their lives, meeting the first criteria for a resilience process (Hawley and DeHaan, 1996; Luthar, Cicchetti & Becker, 2000; Patterson, 2002a, 2002b). At the individual level, the mothers experienced both financial strains and adverse life circumstances. Yet it also can be argued that the adversities that go along with financial strains affected the whole family, as some of the families were food insecure and had difficulty paying bills at points over the three years. Yet the *sources of strength* evident in these women and their families could be characterized as tools that were activated intentionally by the women (and their spouses or partners) to keep their families working together and moving in a forward direction.

Two of the women in the *moderate* depression pattern were qualitatively unique in their resilience processes in that they reported the fewest and least adverse *sources of stress* as well as the fewest *sources of strength*. The negative outlook on life they possessed may be more consistent with theories of cognitive and interpersonal vulnerabilities to depression. Negative cognitions may lead them to ruminate about negative events or stressors in their lives (Abramson & Alloy, 2006; Gotlib & Joorman, 2010; Joorman, 2009), which may prevent them from identifying possible solutions and moving forward. Their perceptions of having low levels of support available to them, and "doing it all alone" may be consistent with dysfunctional interpersonal schemas (Hammen, 2006; Hammen, Burge, Daley, Davila, Paley & Rudolph, 1995), and may explain why these women did not actively engage support networks to help off-set their stressors.

That their depression scores stayed in the moderate range over the course of the study is puzzling, but it is possible that they had not encountered a negative life event traumatic enough to trigger higher levels of depression (Levinson, 2009). It is also possible that the instrument used to measure depression in community-based samples (the CES-D, Radloff, 1977) did not capture enough depressive symptoms to adequately characterize depression in these women.

**A Cultural Role in Resilience Processes**

There was a cultural factor that seemed to play a role for the two women in the study who were of Mexican origin. Family togetherness (familismo) is an important cultural value for Latino families and has been shown to play a role in their sense of resilience (Parra-Cardona, Bulock, Imig, Villarruel & Gold, 2006). However, family togetherness was a major source of stress for both of these women, and for two very different reasons. Nostalgia for migrant life when she worked with her family on a daily basis contributed to one woman's sense of having mixed feelings. The other woman felt constrained by her family and the level of control they exerted over her and her daughter. She seemed to feel conflicted by a desire to pull away from her family and feel independent, and a sense of duty and obedience to the cultural value. The disparate stories of these two women around a central cultural value highlights the complexity of influences cultural values can have on families, and how important they are to the resilience process (Parra-Cardona, Bulock, Imig, Villarruel & Gold, 2006). This is consistent with Ungar's (2010) recommendation that culture and context play a central role in research and practice when working with ethnic and minority populations.

**Limitations**

This study offers a unique contribution to the literature by providing insight into the contextual nuances that distinguished depression patterns among the rural low-income mothers in this study, as well as resilience processes the mothers and their families developed; however it is not without limitations. The family resilience literature suggests that shared meanings of challenges and capabilities among family members are central to the concept of family resilience. Although spouses/partners and children were sometimes present during the interviews, there were only two cases (in this specific sample) in which a spouse or partner contributed information to the interviews. Information obtained from other household members may have provided a better means for observing the processes by which the sample families created shared meanings and situational appraisals. Their participation would have provided better insight into the effect of the mothers' depression on the family system.

Data on depression for this study was obtained from a community-based sample using a self-report instrument (the CES-D, Radloff, 1977). While a two of the mothers reported that they were taking medication for depression, little is known about the nature of the diagnosis and the lifetime history of depression among the women in the sample. For instance, among the women who did report that they were taking medication, there is no information on who made the diagnosis (primary physician or psychiatrist), how they made the diagnosis (e.g., structured interview versus self-report), or the history and course of their depression (e.g., age at first onset, whether they were currently in a major depressive episode or in recovery, or average length of depressive episodes). Therefore, the findings of this study may not generalize to populations of clinically diagnosed depression.

Last, purposive sampling including three extreme cases for the qualitative analyses enabled rich exploration and shed light on characterization of the depression patterns; however the small sample within each pattern may have limited theoretical saturation. Future studies could expand such investigations to include larger samples within each pattern. Conversely, future studies could also focus sampling frames to explore contextual nuances of depression patterns that may be identified among other populations, such as fathers, urban populations, ethnic and minority populations, and specific age groups. Despite the stated limitations, the compelling findings using mixed methods and a longitudinal depression categorization have implications for further studies with larger samples.

**Implications for policy and practice**

It is apparent from the findings that having a perception of parental and family strengths is important for resilience processes. Perceived social support plays a crucial role in that women and families experiencing bonadaptation actively tapped into strong social support networks, while those experiencing maladaptation perceived themselves and their families as having little to no access to social support. In addition, at least one of the mothers indicated a need for practical job training. The findings have implications for therapeutic and educational collaborations that focus on parenting, marital relationships and general relational skills that will empower mothers with depression vulnerabilities to build healthy attachment cognitions and healthy social support systems. Inclusion of family members also is important, particularly spouses or partners, in order to strengthen relational skills and adaptability within the family system. Clinicians undertaking such a task must possess a comprehensive understanding of the complex nature of depression and the way it plays out in families. In addition to relational

aspects, educational programs should have practical applications that will equip low-income mothers to write a resume and prepare for job interviews.

From a social and health services standpoint, programming and policy that places cultural and contextual understanding at the center of service delivery (Parra-Cardona, Bulock, Imig, Villarruel & Gold, 2006; Ungar, 2010) is important for identifying depressed individuals and families experiencing multiple, interrelated stressors. Service providers and stakeholders are needed who understand that depression and multiple health problems compound financial stress and exacerbate strains in relationships and family functioning. Physicians sensitive to such issues are helpful when they are willing to complete necessary forms and advocate in court to help connect patients with needed resources (e.g., disability determination forms and hearings). In addition, family advocates placed within health organizations can help individuals and families establish networks of formal support.

Finally, policies for determining eligibility for supplemental support and for social security disability should consider the complex relationship between depression and multiple medical problems. Many of the women in the high, worsening and erratic patterns had difficulty qualifying for social security, despite their debilitating pile-up of medical problems and severity of depression. The findings from this study are consistent with Moussavi, Chatterji, Verdes, and Tandon, et. al. (2007), who used data from the WHO World Health Survey to determine that depression had the largest effect on worsening health scores than other chronic conditions tested. That is, compared to angina, arthritis, asthma and diabetes, "the comorbid state of depression incrementally worsens health compared with depression alone, with any of the chronic diseases alone, and with any combination of chronic diseases without depression" (p. 851). These results held across countries and across demographic characteristics. The findings confirm that

regardless of causal direction, it is important to consider health problems and the history of depression when disability determinations are made.

## Conclusions

A strength of the study was the longitudinal and mixed method design, which provided a methodological structure for analyzing both quantitative and qualitative data in relation to depression. The findings provided valuable insight to the complex nature of depression and how patterns of depression can play out in the context of rural low income families. Another strength was the analysis and organization of the data according to longitudinal depression patterns. This allowed for unique nuances of resilience processes within each depression pattern to be observed, both at the individual and family levels. The additive and interactive nature of the sources of stress suggested a metaphor of a "swirling vortex", which was especially compelling for women in the high, worsening and erratic patterns. On the other hand, the ability of many of the mothers to actively tap into sources of strength must be emphasized. Additionally, the role that culture played among the two women of Mexican origin brought forth new insight into an important cultural value, familismo, and its relationship with resilience. Together, these findings highlighted nuances of resilience processes that help to build upon a resilience framework

# CHAPTER 4
# STUDY 2: INVESTIGATING RURAL LOW-INCOME MOTHERS' LONGITUDINAL DEPRESSION PATTERNS USING A RISK AND RESILIENCE FRAMEWORK


## Abstract

A mixed methods, longitudinal design and risk and resilience and ecological models were used to explore the ways risk and protective factors organized themselves according to six depression patterns for eighteen rural low-income mothers. MANOVA and MANCOVA procedures provided insight into how the risk and protective factors organized themselves amid depression patterns. Mothers in the high, worsening, and erratic patterns experienced more health problems, child health problems, financial strain and food insecurity. Mothers in the low and improving patterns experienced fewer risk factors, and reported a higher sense of parental confidence and social support. Qualitative analyses provided further explanation and support for the quantitative findings, and provided insight into the relationships among the risk factors and the interactive ways the mothers tapped into protective factors. The findings highlight the complexity of resilience processes in the face of maternal depression among rural low-income women. Implications for policy and practice are discussed.



Keywords: maternal depression, health, financial strain, resilience, social support, parenting

## Introduction

Depression is a devastating disease, affecting the daily context of personal and family life. Much has been learned about the causes or contributing factors of depression in men and women (e.g., Ross & Huber, 1985; Ross & Mirowsky, 1989; Mirowsky & Ross, 1990; and Turner & Lloyd, 1999). More recently, researchers have been able to illuminate family relationship dynamics specifically related to depression in mothers (Brown, Brody & Stoneman, 2000; Smith & Howard, 2008; Gross, Shaw, Burwell & Nagin, 2008; and O'Brien Caughy, Huang & Lima, 2009). The field has increasingly focused on the correlates and detrimental effects of maternal depression. Such interest is justified when considering the far-reaching consequences experienced by children and families when mothers suffer from depressive symptoms.

However, a better contextual understanding of maternal depression is needed and can emerge when looking longitudinally at patterns of depression and their influences on personal and family life contexts. The human ecological approach provides a framework for that contextual understanding (Bronfenbrenner, 1986). Using mixed methods, this study considered specific components of the Process-Person-Context-Time (PPCT) model (Bronfenbrenner, 1986, 1989, 1994, and as discussed by Tudge, Mokrova, Hatfield & Karnik, 2009). For example, quantitative analyses explored characteristics of the mothers that influence their depression patterns, such as the number of health problems they suffer, their sense of parental confidence, and their outlook on their family's financial situation. Also explored were characteristics of the family context that influence rural mothers' depression patterns, such as the number of child health problems and the degree to which a family is food insecure. Qualitative analyses further explored individual and contextual characteristics that reveal proximal processes within the

family microsystem and processes between rural mothers, their families and other systems (mesosystem).

Through a risk and resilience lens, components of the PPCT model (individual and contextual characteristics and proximal processes) were conceptualized as risk and resilience factors. Resilience is defined as a "dynamic process encompassing positive adaptation within the context of significant adversity" (Luthar, Cicchetti & Becker, 2000, p. 543).

*Risk factors* refer to adversities individuals and families experience that pose threats to positive development (Masten & Powell, 2003). Such risks may exist within the individual (e.g., physical disabilities, mental illness) or in the developing individual's environment (e.g., poverty, divorce, abuse). Conversely, *resilience mechanisms* are factors and processes that protect individuals and families from adversities. Protective factors may exist within an individual (e.g., parenting strengths) or in the individual's environment (e.g., social support).

**Common Risk Factors of Maternal Depression**

Depression has been characterized as a constellation of behaviors and symptoms that affect physical abilities (e.g., fatigue, decreased appetite), emotions (e.g., feelings of guilt or worthlessness), and cognitive abilities (e.g., difficulty with concentration,) (Gotlib & Joormann, 2010). According to Gotlib and Joormann, "depression is primarily a disorder of emotion dysregulation and sustained negative affect" (p. 287). Research has consistently shown that women are more likely to suffer from depression than men (Ross & Mirowsky, 1989; Kessler et al., 2003), particularly women of child-bearing ages (18-45 years old) (Substance Abuse and Mental Health Services Administration, 2010).

Many risks of maternal depression have been identified, such as socioeconomic status, economic strain and poverty, (Brown, Brody & Stoneman, 2000; Casey, et.al., 2004; Coiro,

2001; Dennis, Parke, Coltrane, Blacher, & Borthwick-Duffy, 2003), and food insecurity (Olson, Anderson, Kiss, Lawrence, & Seiling, 2004; and Olson, 2006). However, the literature paints a complex picture of the relationship. For example recurrent exposure to poverty during critical stages of childhood and adolescence is linked with depression in adolescence and early adulthood (Najman, Mohammad, Clavarino, Bor, O'Callaghan & Williams, 2010). Poverty also has been shown to be associated with depression among women, such that changes in economic status bring about changes in depression (Dearing, Taylor, & McCartney, 2004). Recent longitudinal studies aiming to untangle the causal relationship support social causation models (Eaton, Muntaner, Bovasso & Smith, 2001; Monroe, Slavich & Georgiades, 2009; Simmons, Braun, Charnigo, Havens & Wright, 2007). According to social causation models, chronic poverty, limited access to resources and supports, and family and life stressors place individuals at higher risk for health and mental health struggles (Simmons, Braun, Charnigo, Havens & Wright, 2007). In many of these studies family or household income was used to measure poverty. However, other studies have revealed a weak association between income and depression and have found instead that the relationship is mediated by individuals' subjective perception of economic strain and material loss (Dennis, Parke, Coltrane, Blacher, & Borthwick-Duffy, 2003; Ennis, Hobfall & Schroder, 2000; Hovey & Magaña, 2002; Ross & Huber, 1985).

The relationship between depression and health problems is also complicated. It is often assumed that health problems are risk factors for depression. However, as Freedland and Carney (2009) point out, chronic health problems in most people begin to appear later in life, whereas depression peaks in adolescence and early adulthood. Complications also arise when examining correlations between depression and specific health problems, such as diabetes, arthritis, stroke, heart attack, and so forth. It appears that painful conditions, such as arthritis and migraine

headaches, are stronger predictors of depression than other diagnoses (Freedland & Carney, 2009). However, the causal direction of the relationship between depression and other health problems can be difficult to assess.

**Common Protective Factors Associated with Maternal Depression**

A sense of confidence in one's parenting abilities has been found to have mediating effects in regard to several parenting stressors (e.g., depression) and their relationships to child outcomes. In their study, Ontai, Sano, Hatton and Conger (2008) used parental confidence as their dependent variable and found that rural low-income mothers' parental confidence was directly influenced by the presence of parent and child health problems. The relationship was mediated by the presence of parental support for mothers with partners, but not for single mothers. That is, the strength of the influence of family health problems on parental confidence was decreased when rural mothers were married or had a partner living in the home. It appears that for the daily hassles of parent and child problems, having another adult in the home helps alleviate the strains brought on by those daily hassles.

Parental confidence also can be a moderating variable. For example, Knoche, Givens & Sheridan (2007) found that adolescent mothers with high levels of depression but whom also had a high sense of parental competence had children who scored higher on cognitive tests. This is in comparison to adolescent mothers reporting high levels of depression and a low sense of parental competence, whose children scored lower on cognitive tests. A sense of parental confidence also is an important mediator for the influence of parents' personality characteristics (e.g., extraversion and agreeableness) and their parenting characteristics (e.g., warmth, over-reactivity) (de Haan, Prinzie & Dekovic, 2009). In another study, Jackson and Scheines (2005) found that parent self-efficacy beliefs were a mechanism which mediated the effects of maternal

employment on parenting behaviors and child outcomes. Thus the research points to the importance of parental confidence to family relationships and functioning. Parental confidence can be a protective factor for families, and was shown in the research discussed to be an important process variable.

Social support is another construct that has been found to be protective for mothers with depression (Brown, Body & Stoneman, 2000; Hammen, 2006; Islam, 2004; Richards, Manoogian, Seiling & Bird, 2002). Social support was reported earlier to mediate the relationship between family health problems and parental confidence among rural low-income women (Ontai, Sano, Hatton and Conger, 2008). Similarly, Bulock (2004, 2007) found that parental social support (that is, social support specific to the parenting role) mediated the relationship between parental confidence and depression among rural low-income women.

Further, social support is a concept that links the resilience and depression literature. Important sources of social supports for individuals include close and caring relationships with parents and other competent adults, associating with prosocial peers, and connections to positive community assets such as clubs, religious groups and libraries (Masten and Powell, 2003). Similarly, several models used in the family resilience literature (McCubbin & Patterson, 1983; Patterson, 2002) point to the importance of families tapping into social support resources both inside and outside of the family.

**Hypotheses**

For this study, mothers from the Rural Families Speak study were divided into six groups which reflect the longitudinal patterns of their depression experiences. The depression patterns are described more fully in the next section, but include stable low, stable moderate, high depression, worsening depression, improving depression and erratic depression. Comparisons

were made across patterns to explore ways in which risk and protective factors may work uniquely within each depression pattern. Five research hypotheses for this study are presented:

H1: Mothers with low levels of depression across all three years will have fewer risk factors than mothers in the other depression patterns.

H2: Mothers whose depression was high all three years, or whose depression worsened over the course of the study, will have more risk factors than mothers in the other depression patterns.

H3: Food insecurity and a higher number of health problems will be risk factors for mothers in the high and worsening depression patterns.

H4: The relationship between monthly income and depression will be mediated by mothers' perceptions of economic strain for the whole sample.

H5: The relationship between mothers' sense of parental confidence and depression will be mediated by mothers' perceptions of parental social support for the whole sample.

Consistent with the exploratory nature of this study, post hoc analyses will examine differences between the depression patterns for each of the dependent variables. Qualitative themes will provide contextual explanations to further support quantitative findings.

## Methods

Data from the Rural Families Speak project were analyzed for this study. Rural Families Speak was a multiple state research project that employed a multidisciplinary, longitudinal, and mixed methods approach to develop an understanding of the challenges and complexities faced by rural low-income families within the context of welfare reform. See Bauer (2004) and Bauer and Dolan (2011) for more background information about Rural Families Speak project and participants.

**Sample**

A purposive sample was selected for the Rural Families Speak study due to the difficulty in obtaining a consistent across state random sample of rural low-income, highly mobile families Most states recruited their participants through food programs or other agricultural extension education programs for low-income families. To be included in the study, each family had to have at least one child 12 years old or younger living in the home. Families also had to be eligible for, but not necessarily receiving, Food Stamps or the Supplemental Nutritional Program for Women Infants and Children (WIC), or have a poverty ratio less than 200% of the poverty level limit. The sample included participants from four states in the Eastern region, five in the Central region, two in the Southern, and four in the Western region. Compared to low-income rural families in the nation, the Rural Families Speak sample had a higher proportion of rural Latino(a) families (17%), a lower proportion of White families (69%), and a lower proportion of Black families (6%). Native American families (n=2, 0.9%) were not targeted for recruitment due to complicated circumstances regarding tribal benefits and services.

The sample from the first wave of the Rural Families Speak project included 433 mothers for wave one, 326 for wave two, and 271 for wave three. The quantitative portion of the present study was limited to mothers who participated in all three waves of data collection so that longitudinal depression patterns could be studied ($N = 233$). Further, eight mothers were missing 100% of items from two important variables (parental confidence and parental support). Close inspection of the depression patterns for the eight mothers revealed that there was no pattern to their missing data in relation to depression. Four of the mothers were in the "low" depression pattern, one was in the "moderate" pattern, one was in the "high" pattern, and two were in the "erratic" pattern. It was determined to eliminate the eight cases to prevent a loss of statistical

power, rather than using listwise deletion in analyses (Schlomer, Bauman, & Card 2010). This brought the sample for the present study to $N = 215$. In the remaining sample, person mean substitution was used for the depression measure for all three waves when cases were missing less than 20% of the items (Downey & King, 1998; C. F. Page, personal communication, February 16, 2004).

Table 4.1 compares the sample from the first wave to the current sample of mothers. There are differences in ethnicity and education level when comparing the two samples. The current sample includes a higher percentage of mothers who are non-Hispanic White ($\chi^2(6, 410) = 18.88$, $p < 0.05$) and who are more educated ($\chi^2(6, 412) = 44.11$, $p > 0.05$). There are no significant differences between the two samples in terms of depression ($t$ (384) = 0.289, $p$ = 0.773), age ($t$ (408) = -1.20, $p$ = 0.106), or annual income ($t$ (411) = -0.895, $p$ = 0.371).

Table 4.1. Characteristics of Rural Families Speak Wave 1 Sample and Present Study Sample

| | Dropped from RFS ($N = 198$) | Current Sample at Wave 1 ($N = 215$) |
|---|---|---|
| W1 Depression Score – range 18-59; mean (*SD*) | 17.6 (11.7) | 17.3 (11.1) |
| Demographic Variables | | |
| Participant's Age – Mean (*SD*) | 29.4 y.o. (7.49) | 30.6 y.o. (7.45) |
| Annual Income – Mean (*SD*) | $15,044 (10,681) | $ 15,962 (10,172) |
| Ethnicity | | |
| Non-Hispanic White | 56.3% | 71.8% |
| Hispanic/Latina | 28.9% | 15% |
| African American | 10.7% | 7.0% |
| Native American | 1.5% | 0.9% |
| Multi-racial | 4.0% | 5.0% |
| Other | 0.5% | 0.5% |
| Education | | |
| 8th grade or less | 18.3% | 3.3% |
| Some high school | 27.4% | 15.3% |
| High school or GED | 25.9% | 30.2% |
| Specialized technical, business, or vocational training after high school | 9.6% | 17.2% |
| Some college, including AA | 16.8% | 29.3% |
| College or university graduate | 2.0% | 3.7% |
| Graduate degree | 0.0% | 0.9% |

**Data Collection**

The project collected three waves of quantitative and qualitative data from 24 counties in 14 states. Protocols for each wave were approved by research ethics boards for each participating site, and participants provided informed consent for each wave. The project collected three waves of quantitative and qualitative data over a five year time period from 24 counties in 14 states. Trained interviewers in each state conducted interviews face-to-face with the woman in the family for about two hours using a semi-structured protocol, were tape-recorded and later transcribed for data analysis. Quantitative data included demographic,

financial and employment information, as well as information on the number of health and mental health problems in the family and their access to health care. Instruments included the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977); the Parenting Ladder (Richards, 1998); and the Core Food Security Module (Hamilton et al., 1997).

Qualitative protocol included open ended questions designed to gain more detailed information about participants' responses to the quantitative questions. For instance, when asking mothers about their employment status, interviewers also would ask whether anything or anyone made it more difficult for the mother to work. Likewise, after completing the CES-D and the Parenting Ladder, interviewers would ask mothers to elaborate on items of interest. For example, mothers were asked to rate themselves on the Parenting Ladder in terms of "your overall satisfaction with the amount of support in your life," after which interviewers asked the mothers to explain why they rated themselves that way.

**Measures**

**Maternal depression** was measured using the Center for Epidemiologic Studies Depression Scale (CES-D), which was designed to measure symptoms of depression in the general public (Radloff, 1977). Participants were asked to rate how often they experienced certain feelings within the last week. Responses ranged from "rarely or none of the time" (coded as 0) to "most or all of the time" (coded as 3). Sample items included: "I could not shake the blues," "I had crying spells," and "I felt depressed." Responses are summed, and total scores range from zero to 36. Studies testing validity have shown that the CES-D is highly correlated with other measures of depression (Radloff, 1977). The 20-item inventory has a reported high

internal reliability, with Cronbach's alpha of 0.82 (Radloff, 1977). Cronbach's alpha for the current sample for wave one ($N = 215$) is 0.89.

The sample was divided into six depression patterns, which was done in two steps. For the first step, mothers' depression scores for each year of data collection were coded into four categories according to Seligman's recommendation (1998): nondepressed, and mildly, moderately and severely depressed.

Table 4.2 reflects the changes that occurred in depression over time in an aggregated sense. When looking at changes across the whole sample, it appears that the number of mothers with no depression increased, and the number of mothers with moderate or severe depression decreased.

Table 4.2. Numbers And Percentages Of Mothers In Each Depression Category For Each Wave

| Depression Category | Depression score range | Wave 1 $n = 215$ (%) | Wave 2 $n = 215$ (%) | Wave 3 $n = 215$ (%) |
|---|---|---|---|---|
| Nondepressed | 0-9 | 59 (26) | 83 (37) | 85 (38) |
| Mildly depressed | 10-15 | 51 (23) | 61 (27) | 52 (23) |
| Moderately depressed | 16-24 | 62 (28) | 49 (22) | 42 (19) |
| Severely depressed | >24 | 51(23) | 30 (14) | 44 (20) |

The above step allowed for comparisons of the levels of depression across all three years for the sample. However, this snapshot is more complicated when comparisons are made across all three years for each mother. Such comparisons led to the emergence of longitudinal depression patterns. That is, upon examining depression at each wave for each mother, it became clear that depression levels varied greatly for many mothers each year.

Therefore, the second step involved placing each mother into one of six *longitudinal depression patterns*:

- *Stable low* pattern consisted of mothers who reported depressive symptoms consistent with categories one and two (nondepressed and mildly depressed), and who remained in those low categories across time (low → low → low) ($n$ = 75).
- *Stable moderate* pattern consisted of mothers who reported depressive symptoms in the moderately depressed range over time (mod → mod → mod) ($n$ = 25).
- *High depression* pattern consisted of mothers whose depression remained in the severely depressed category all three waves (high → high → high) ($n$ = 14).
- *Improving depression* consisted of mothers who experienced high levels of depression the first wave, but reported much lower symptom levels by the second and third waves (high → low → low) ($n$ = 48).
- *Worsening depression* consisted of mothers experiencing few depressive symptoms during the first wave, but more severe depressive symptoms over the next two waves (low → high → high) ($n$ = 34).
- Finally, for some mothers the pattern was *erratic*, such that the reported symptom levels changed dramatically each year of data collection (high → low → high) ($n$ = 28).

**Risk Factors**

**Perceived economic strain** is conceptualized as a rural mother's subjective perception that her family's economic situation has worsened or improved. It is used as a covariate in these analyses because it is highly correlated with food insecurity, $r(203) = -0.307$, $p < .01$. Surprisingly, it is not significantly correlated with average monthly income for the current sample, $r(214) = 0.088$, $p = 0.200$. Operationally, mothers' perceived economic strain is a one-item measure Likert scale with responses coded from one-to-five. The participants were asked the extent to which they thought their economic situation had changed compared to the previous

year. Responses ranged from "gone down a lot" (1) to "improved a lot" (5). The variable was reverse coded for this study so that higher scores meant higher sense of economic strain.

**Mothers' number of health problems** was measured using the adult health surveys developed by the Oregon State University Family Policy Program (Richards, et al., 2000). The items were compiled from medical screening forms typically used by health care providers. Each condition was coded as (1) if the respondent indicated it was present, and responses were summed.

**The average number of child health problems** was measured using child health surveys similarly developed by the Oregon State University Family Policy Program (Richards, et al., 2000). Total health problems were summed for each child, and then totaled for all children in the family. To account for family size, the family's average number of child health problems was computed and used in this study. Average scores ranged from zero to 11.6.

**Average monthly income** was calculated by adding and then averaging all of mothers' sources of income (excluding food stamps), including their wages and wages of spouse or partner, overtime, social security disability, retirement or pensions, unemployment, worker's disability, child support, and temporary assistance to needy families (TANF/MFIP).

**Food insecurity** was measured using the Core Food Security Module (Hamilton et al., 1997), which has been found to have good reliability, with a Cronbach's alpha coefficient of 0.81 for homes with children. In addition, responses to items have been found to be consistent across diverse populations, including racial and ethnic minorities, and scale scores are significantly related to the Poverty Income Ratio in the expected ways, indicating validity. This is a constructive scale, with final scores calculated by the Rural Families Speak - New York team. A higher score on the scale means a family is more likely to be food insecure.

**Protective Factors**

**Marital status** of the mother is a demographic measure reflecting family structure. Possible responses to this item are single, married, living with partner, divorced, or separated.

**Parental confidence** is conceptualized as participant's subjective feelings about her abilities, or role fulfillment, as a parent. Parental confidence is one component of "The Parenting Ladder" which is a measure constructed by the Oregon State University Family Policy Program (Richards, 1998). Each item is scored on a seven point scale in terms of where the participant would put herself on the ladder. A score of 0 means the person places herself at the lowest point on the ladder, with 6 as the highest point. Items for the parental confidence portion ask participants where they would put themselves on the ladder in terms of, for example: a) knowledge of how children grow and develop; b) confidence that one knows what is right for the child; and c) success in teaching the child how to behave. Cronbach's alpha has been shown to be 0.70. Cronbach's alpha for this sample was 0.68 ($N = 215$).

**Parental support** is conceptualized as social support that is specific to supporting mothers in their parenting role. However, it is used in these analyses as a covariate because it is significantly correlated with parental confidence, $r(211) = 0.439$, $p < .01$. Operationally, parental support is the other component of "The Parenting Ladder." This six-item portion asks participants about support they get from others for their parenting role. Items for the parental support portion ask participants where they would put themselves on the ladder in terms of, for example: a) other parents to talk to; b) someone to help in an emergency; and c) someone to offer helpful advice or moral support. Cronbach's alpha has been shown to be .86, and was 0.82 for this study ($n = 215$).

**Analysis Strategy**

The data for the larger Rural Families Speak study were collected consistent with a concurrent triangulation design (Creswell & Plano Clark, 2007; Creswell, Plano Clark, Gutmann, & Hanson, 2003) in which the quantitative and qualitative data were collected at the same time, however, integration for this particular study occurs at the analysis stage in which "statistical trends are supported by qualitative themes" (Creswell, Plano Clark, Gutmann, & Hanson, 2003, p. 233). The wave one data set was used for the quantitative analyses. Using quantitative data from all three waves would have been preferable; however there were more missing data in the second and third waves. Therefore, it was decided to use wave one data to have the maximum amount of data available to conduct these exploratory analyses.

First, comparisons were made in order to characterize each variable by mothers' longitudinal depression pattern. Pearson's chi-square was used to test relationships between nominal demographic variables and mothers' depression patterns, and MANOVA and MANCOVA procedures were conducted to explore relationships among the remaining interval and ratio level variables and mothers' depression patterns. Because of the exploratory nature of the study, post hoc analyses were conducted to learn how distributions for each variable differed by depression pattern.

Next, three cases from each of the depression patterns ($n$ = 18 cases) were selected for qualitative analyses. Extreme cases in each pattern were selected. Guided by the research questions, hypotheses and conceptual framework, comparing and contrasting multiple cases within each pattern can "strengthen the precision, the validity, and the stability of the findings" (Miles & Huberman, 1994, p. 29). Thus, for each pattern, cases were selected based on extreme depression scores Mothers with consistently lowest depression scores were selected for the low

depression pattern. Mothers with the consistently highest depression scores were selected for the high pattern. For the improving, worsening and erratic patterns, mothers were selected for the extreme values in depression scores across all three waves, according to their pattern. In addition, where possible, cases were selected from different states for each pattern to vary location. The worsening depression pattern is the only pattern in which more than one case was from the same state.

For each case, the mothers' transcripts for all three years were analyzed. Thus a total of 54 transcripts were coded and analyzed (three mothers X six depression patterns X three transcripts) using MaxQDA software (Belous, 2007). Theoretical thematic analyses were conducted, using the quantitative variables as theoretical guides. However, analysis was at the latent level, rather than the semantic level, in order to examine the underlying differences between and conceptual nuances of the variable indicators among the depression patterns (Braun & Clarke, 2006). The first step involved familiarization with the data by reading and re-reading the cases and creating memos about initial ideas about the relationship between the qualitative data, the quantitative data, and the theoretical framework. Open coding was conducted next to create initial codes, followed by organizing codes into potential themes related to the quantitative variables. The final steps involved an iterative process of reviewing themes in relation to the codes, in relation to the depression patterns, and in relation to the whole data set, followed by refining of themes and "the overall story the analysis tells" (Braun & Clarke, 2006, p. 87). The objective of the qualitative analyses was two-fold: 1) to gain an understanding of the context in which these patterns occur, specifically the ways in which risk and resilience factors and processes differed across patterns and; 2) to provide clarification, support, or a fuller explanation of quantitative findings.

## Results

Table 4.3 presents the characterization of demographic variables with mothers' depression patterns. A univariate analysis of variance revealed that there are no significant differences among the depression patterns in terms of mothers' age, ($F$ (5, 208) = 0.889, $p$ = 0.49), or education levels, ($\chi^2$ (5, 213) = 1.86, $p$ = 0.87). There were a higher percentage of Hispanic/Latina mothers in the *low* depression pattern compared to White and African American mothers, and a higher percentage of African American mothers in the *moderate* and *improving* depression pattern compared to White and Hispanic/Latina mothers. Overall the chi-square value for these comparisons was $\chi^2$(15, 215) = 14.57, but not statistically significant at the 0.05 level ($p$ = 0.48). Similarly, the overall chi-square value for comparisons between mothers' marital status and depression patterns was $\chi^2$ (20, 215) = 14.76, but did not achieve statistical significance ($p$ = 0.79). However, one can see that mothers who were in the low and improving depression patterns were more likely to be married or living with a partner, while mothers in the high and worsening depression patterns were more likely to be single, divorced or separated. Mothers with a moderate pattern were likely to be living with a partner, and mothers with an erratic pattern were equally likely to be single, married, or divorced.

Because of the non-significant relationships for age and education, these variables are not included in the MANOVA model. Collapsing categories for ethnicity and marital status did not increase cell sizes or help make the cells more even. This is likely due to the number of depression patterns and small study sample. Therefore, these two variables also are not included in the MANOVA model.

Table 4.3 Demographic Variables Characterized By Rural Mothers' Depression Patterns

| | Low<br>*n* = 75<br>*% (n)* | Moderate<br>*n* = 25<br>*% (n)* | High<br>*n* = 14<br>*% (n)* | Improving<br>*n* = 48<br>*% (n)* | Worsening<br>*n* = 34<br>*% (n)* | H-L-H<br>*n* = 27<br>*% (n)* |
|---|---|---|---|---|---|---|
| Age<br>*M (SD)* | 31.2 (8.2) | 29.1 (6.8) | 31.6 (7.4) | 29.6 (7.0) | 30.2 (7.0) | 32.6 (7.1) |
| Education | | | | | | |
| High school & less | 30.6 (22) | 9.7 (7) | 6.9 (5) | 26.4 (19) | 16.7 (12) | 9.7 (7) |
| More than high school | 34.0 (48) | 12.1 (17) | 5.7 (8) | 19.9 (28) | 15.6 (22) | 12.8 (18) |
| Ethnicity | | | | | | |
| White | 30.7 (47) | 10.5 (16) | 7.8 (12) | 20.9 (32) | 16.3 (25) | 13.7 (21) |
| Hispanic/Latino | 40.6 (13) | 12.5 (4) | 0 | 21.9 (7) | 15.6 (5) | 9.4 (3) |
| African American | 33.3 (5) | 26.7 (4) | 0 | 26.7 (4) | 6.7 (1) | 6.7 (1) |
| Other | 40.0 (6) | 0 | 6.7 (1) | 33.3 (5) | 20.0 (3) | 0 |
| Marital status | | | | | | |
| Single | 31.5 (17) | 11.1 (6) | 7.4 (4) | 20.4 (11) | 16.7 (9) | 13.0 (7) |
| Married | 39.0 (32) | 7.3 (6) | 4.9 (4) | 23.2 (19) | 12.2 (10) | 13.4 (11) |
| Living w/partner | 22.9 (8) | 17.1 (6) | 5.7 (2) | 34.3 (12) | 14.3 (5) | 5.7 (2) |
| Divorced | 31.0 (9) | 13.8 (4) | 6.9 (2) | 17.2 (5) | 17.2 (5) | 13.8 (4) |
| Separated | 33.3 (5) | 13.3 (2) | 6.7 (1) | 6.7 (1) | 33.3 (5) | 6.7 (1) |

Table 4.4 presents the means and standard deviations of the dependent variables according to mothers' depression patterns. The covariates were included in Table 4.4 to show distribution of those variables among depression patterns. A one-way MANOVA was conducted to test the model with all of the dependent variables (including the covariates, parental support and economic strain), and revealed a multivariate main effect for mothers' depression patterns, Wilks' $\lambda = 0.561$, $F\,(35, 793.27) = 3.34$, $p < .05$, partial $\eta^2 = 0.109$. Power to detect the effect was 1.000. A Box's test of equality of covariance matrices approached significance, suggesting

differences among the depression patterns in the covariance matrices, *Box M* = 192.49, *F* (140, 13481) = 1.20, *p* = 0.058. Because of the exploratory nature of the study, post hoc analyses were conducted to determine distributions for each variable differed by depression pattern. These results and ANOVA results are described below, but first, due to the Box's test, it is important to explain results of a MANCOVA that was run to control for the effects of parental support and economic strain. This test revealed that the overall main effect for mothers' depression patterns remains significant, but the *F* and partial eta squared values are decreased, Wilks' $\lambda = 0.722$, *F* (25, 699.89) = 2.56, $p < .05$, partial $\eta^2 = 0.063$, and power to detect the effect was .994. Thus, it appears that the covariates may play a mediating role in the relationship between the depression patterns and the dependent variables. It is important to consider these results when interpreting the univariate and post hoc results.

Given the significance of the overall test, the univariate main effects were examined. Maintaining an experiment-wise alpha rate of 0.05 required that it be divided by seven (for seven dependent variables X one independent variable) in order to obtain an acceptable confidence level for each test to decrease the probability of a Type I error (Howell, 2002). Therefore, the alpha level is set to $p < 0.007$ for each of the univariate analyses. The depression patterns have significant univariate main effects on six of the dependent variables; however, there was not a significant univariate effect on monthly income:

- Health problems: *F* (5, 194) = 9.0, $p < .001$, partial $\eta^2 = .20$, power = 1.000
- Child health: *F* (5, 194) = 7.5, $p < .001$, partial $\eta^2 = .16$, power = .999
- Monthly income: *F* (5, 194) = 2.1, $p = .07$, partial $\eta^2 = .05$, power = .687
- Food insecurity: *F* (5, 194) = 9.2, $p < .001$, partial $\eta^2 = .20$, power = 1.000

- Economic strain: $F$ (5, 194) = 3.5, $p < .007$, partial $\eta^2 = .08$, power = .914
- Parental confidence: $F$ (5, 194) = 6.3, $p < .001$, partial $\eta^2 = .14$, power = .996
- Parental support: $F$ (5, 194) = 7.2, $p < .001$, partial $\eta^2 = .16$, power = .999

Levene's statistics for the dependent variables are not significant for parental confidence, child health problems, monthly income, economic strain, or parental support, but are significant for mothers' health problems and food insecurity, suggesting that equal variances should not be assumed. Further, because of the uneven cell sizes, especially for the *stable high* depression pattern, the Games-Howell procedure for unequal variances was used for post hoc analyses (Howell, 2002).

The post hoc analyses are of specific interest in order to explore differences among the depression patterns, and Table 4.4 indicates that significant differences were found. Many of the values for the *high depression* pattern were substantively different from values for the other depression patterns, but did not achieve statistical significance, possibly due to small cell sizes for this pattern. Nonetheless, substantively it is important to discuss these differences because of the persistent nature of depression for the women with this depression pattern.

Distribution of the post hoc findings indicate support for H1 in that mothers in the low depression pattern had fewer risk factors than mothers in the other patterns. There is partial support for H2 in that mothers in the high pattern had more risk factors than all the other mothers. The story is complicated for mothers in the worsening pattern in that substantively they have the second highest number of health and child health problems, but the values for food insecurity and perceived economic strain are not different from mothers in the other patterns. Qualitative analyses reported below reveal a different story than the statistics express for the women in this pattern. There is also partial support for H3 in that health problems were higher

risk factors for mothers in the high pattern and worsening patterns; however, food insecurity was not as significant a risk factor for mothers in the worsening pattern as it was for mothers in the high pattern. Again, qualitative analyses contradict the quantitative findings for the women in the worsening pattern. As described earlier, decreases in main effect values after conducting the MANCOVA suggest that the covariates may play a mediating role in the relationship between the depression patterns and the dependent variables, lending support to H4 and H5. Qualitative themes are organized below by risk and protective factors, and help illuminate the context for the quantitative findings.

Table 4.4. Risk And Protective Factors Distributed By Mothers' Depression Patterns

| | Low<br>*n* = 63<br>*M (SD)* | Moderate<br>*n* = 24<br>*M (SD)* | High<br>*n* = 12<br>*M (SD)* | Improving (H-L-L)<br>*n* = 45<br>*M (SD)* | Worsening (L-H-H)<br>*n* = 32<br>*M (SD)* | Erratic (H-L-H)<br>*n* = 24<br>*M (SD)* |
|---|---|---|---|---|---|---|
| ***Risk Factors*** | | | | | | |
| Number of health problems** | 3.5 [c,e]<br>(2.92) | 4.7<br>(3.68) | 10.4 [a,f]<br>(5.84) | 4.7<br>(3.36) | 5.6 [a]<br>(3.23) | 4.3 [c]<br>(2.76) |
| Child health problems** | 2.4 [b,e]<br>(1.81) | 2.9 [c]<br>(1.52) | 5.5 [a,b,f]<br>(2.50) | 3.0<br>(1.87) | 3.7 [a]<br>(1.56) | 2.9 [c]<br>(1.35) |
| Monthly income | 1385<br>(980) | 1230<br>(700) | 958<br>(745) | 1503<br>(859) | 1062<br>(562) | 1597<br>(884) |
| Food insecurity** | 2.2 [c]<br>(3.04) | 3.9 [c]<br>(3.86) | 9.5 [a,b,d,e,f]<br>(3.78) | 3.1 [c]<br>(3.79) | 3.1 [c]<br>(3.60) | 2.6 [c]<br>(2.60) |
| ***Protective Factors*** | | | | | | |
| Parental Confidence** | 33.1 [c,d,f]<br>(4.37) | 31.8 [c]<br>(4.70) | 27.0 [a,b,e]<br>(3.90) | 29.7 [a]<br>(4.52) | 31.0 [c]<br>(4.41) | 29.9 [a]<br>(4.02) |
| **Covariates** | | | | | | |
| Parental support** | 29.8 [d,f]<br>(5.49) | 29.4 [f]<br>(5.38) | 20.7<br>(9.30) | 26.1 [a]<br>(7.93) | 27.1<br>(7.93) | 22.6 [a,b]<br>(6.90) |
| Economic strain** | 2.2 [c]<br>(1.23) | 2.8<br>(1.43) | 3.9 [a,f]<br>(1.44) | 2.8<br>(1.43) | 2.7<br>(1.5) | 2.6 [c]<br>(1.40) |

**$p < .007$. *Note:* Superscripted letters denote a post hoc significant difference between each variable $p < .05$. a = stable low, b = stable moderate, c = stable high, d = improving, e = worsening, f = erratic.

**The Story Behind the Numbers For Maternal Health**

The post hoc analyses indicate that the women in the high depression pattern had more health problems than the women in all the other patterns, although significance was achieved only in comparison to the low and erratic patterns. Qualitative analyses reveal that the number and complexity of health problems in the high depression pattern increased over the three waves of the study. That is, the numbers of problems increased over time and are intertwined with

mental health problems, such as depression and anxiety, consistent with what John, Kerby and Hennessy (2003) call "multimorbidity." In addition, as the health problems worsened, so did the financial problems. These mothers had difficulty qualifying for social security disability, thereby increasing the mothers' sense of financial strain.

The case of Nan (age 42) is typical of the role of health problems for mothers in the high depression pattern. She had a long history of health problems and surgeries since birth, but the problems were made worse when she ruptured spinal disks as a result of a car accident, and then had a fall that caused a re-injury. Surgery did not help and her doctor told her she would have to live with the pain. However, the tremendous amount of pain from her back problems interfered with other areas of her life, such as her ability to do fun things with her children: *"I was real fun. I would go to the park every day, I would chase them and run. I can't do that now."* In addition, frequent hospitalizations kept her from maintaining full time work. This caused a sense of financial strain, and to make matters worse, her social security disability benefits were called into question. It was thought that she had more mental health issues than physical because of the abuse she endured while married to her ex-husband. Thus the relationship between her health problems and depression was made complex by her past history and the processes by which her health problems interfered with her ability to care for and support her family.

Contrary to the statistics reported in Table 4.4, the contextual story was similar for women in the worsening depression pattern and for two of the women in the erratic pattern. Their depression symptoms seemed to be made worse because their health problems interfered with their ability to work and to parent in the manner they wanted. Trinity, a 39 year old single mother with a worsening pattern, explains why she couldn't hold a job, *"Yeah I'm pretty limited on what I can do…the doctor has me limited, I can only do this for so long or that for so long*

*and…"* In addition, her health problems interfered with her parenting, *"I, I don't think he [her two year old son] understands it when I tell him it hurts when you sit on mommy's lap. He don't understand, you know. Or mommy can't carry you. Cause it hurts."*

The difference between these women and the mothers in the high depression pattern appear to be that the women in the high depression pattern had a larger number of health problems which weighed heavily on the quality of their lives. The contextual difference that stood out was that mothers with high depression endured abuse at some point in their lives, either as a child or by a former partner. It does not appear that the women in the worsening and erratic patterns experienced abuse in their lives. Rather, other issues influenced their lives as much as, or more than, their health issues. For example, though Steph (age 49) had many health issues, her erratic depression pattern appeared to also be related to adjusting to and then losing custody of her grandchildren: *"Well the munchkins got taken away and, you know, my health seems to want to be messin' me up, and the winter is about ridiculous!"*

In contrast to the above depression patterns, the women in the low, moderate, and improving patterns spoke less about health problems affecting their lives. While health problems were present, there were fewer reported and they just did not seem to be as much of a factor in their depression symptoms or experience of life. For example, when Jillian (age 40), with a low depression pattern, was asked about her back pain and arthritis, she responded, *"Oh, I just take it in stride."*

**Child Health Problems can be a Factor**

The mothers in the high depression category reported the highest average number of child health problems. The children of these mothers seemed to be more likely to suffer from problems related to the immune system, such as asthma, allergies, and frequent colds. They also

were likely to have a mixture of emotional, behavior, and learning problems. Nan (age 42) was very concerned about her son's mental health because he had witnessed domestic violence close-hand when she was married to her husband. She explains about her son's anger problems:

> *"One time his father had me in a choke hold. [Her son] was two and I was blacking out. His father always held him on every beating and I was beaten on a daily basis…he held my son so I couldn't hit him. So I would never fight back. So anyway, my son grabbed him, he had a beard at the time, and screamed at him to let mom go. Well he let me go and [her son] told my mom, his therapist and a teacher that when he saved me that he wishes that I would have got a knife and killed his father."*

The mothers in the worsening and erratic patterns reported fewer child health problems; however, child behavior problems seemed to influence the quality of personal and family life. Abiona (age 34), with an erratic depression pattern explained in wave two that the biggest challenge facing her family was her sixteen year old daughter's behavior, *"She's a problem child… whatever problem we have, it's normally, she's like right there in the middle of the storm."* Similarly, Mercy (age 27), with a worsening pattern said that her daughter's behavior problems made it difficult for her to work: *"she has ADHD and ODD [oppositional defiant disorder]…when she acts up I have to be there… she really acts up. Not just a little, and it lasts for quite a while."*

Child health problems also were reported by the women in the low, moderate and improving depression patterns. The types of child health problems reported were significant problems, such as diabetes, heart murmurs, asthma, and seizure disorders, as well as mental or behavioral problems such as anger management. Contextually, however, the relationship with

mothers' depression status is less clear. For example, Becca (age 23), with a moderately depressed pattern, relayed that her daughter's health problems made it difficult for her to work because she was sick so often. In addition, she was frustrated with the health care system because it took a lot of time and difficulty getting her daughter's asthma diagnosed. Similarly, Tomasa (age 32), also with a moderate pattern, experienced stress and anxiety when she could not take her daughter to see a cardiologist for a heart murmur because her daughter's Medicaid coverage was not consistent. Tomasa was a migrant farm worker at that point, so Medicaid coverage was dependent upon work availability. She explains:

> *"I applied this year in June but I want it for July because that's the month that there is less work for us…and I wanted Medicaid for my daughter 'cause the doctor said that she could hear a murmur and also she has been having chest pains and trouble breathing…and still, I don't have Medicaid for June for her…and after July then they say that she won't qualify for Medicaid no more."*

Thus for these women, stress was attributed more to difficulties with external systems that did not adequately meet their children's medical issues, and less to the child health problems per se.

**Financial Strain and its Relationship with Food Insecurity and Other Stressors**

The quantitative analyses show that monthly income was not significantly related to the depression patterns, however, financial strain was. In fact, financial strain and food insecurity were significantly associated with each other, and MANCOVA analyses suggest that financial strain plays a mediating role. The qualitative analyses help explain the contexts in which this relationship exists among the depression patterns. Indeed, the interrelationship among the risk factors is complex.

Once again analyses show the mothers with high depression patterns as experiencing a

higher level of risk. They were more likely to report a higher sense of financial strain, and the mean food insecurity score was three times higher than for other patterns. Qualitatively, these both seem to be related to the higher number of health problems experienced by mothers in this group. Health problems interfered with the ability to work, and therefore income levels were variable depending on whether the families qualified for welfare assistance or whether participants qualified for social security disability benefits. This led to a sense of financial strain because they had difficulties making money for food to last each month. According to Zola (age 45), welfare time limits were a concern because it was their only source of income and they had not been able to qualify for social security disability (despite multiple health problems she and her husband each suffered). They had trouble paying their mortgage, and because they could not afford needed house repairs, such as leaky windows and doors, their utility bills were higher. She further explains, *"Yes, um, there was a time where we were having problems getting like the food stamps or we'd have to go to the free pantry, and they really don't give you enough for four people. So we'd always let the kids eat first and him and I would either go without or whatever was left over we would split it."* Feeding the children first was a common strategy mothers in the high, worsening and erratic depression patterns used if there was a shortage of food. Jade (age 33) explains, *"I go for a couple days without eating sometimes, or sometimes we have like a big bowl of popcorn for dinner."*

Results of the post hoc analyses suggest that the mothers in the worsening and erratic patterns were less likely to be food insecure than the mothers in the high depression pattern. However, contextually the situation was very similar. For Trinity (age 39), a single mother with a worsening pattern, health problems made it difficult for her to hold a full time job. She received monthly cash assistance, however the amount varied dependent upon the child support

paid by the fathers of her children. As the amount of child support varied, so did the amount of welfare assistance. This variability and unpredictability caused a hardship for her. She explained the process using one of the fathers, who had a steady job, as an example. The child support came directly out of his paycheck to the county, and then the county would send a check to her. It was supposed to be a certain amount, but the county did not send it on a regular basis or in regular amounts: *"...some weeks I might get a check for six dollars and some odd cents, and the next week it might be the amount I'm supposed to get."* However, the cash assistance she received from the state was based on income in the last 60 days, and there would be a two-month lag in the amount of cash assistance. She further explains, *" OK my income is six hundred dollars this month, but two months down the road they [her children's fathers] might stop paying their child support and my income's going to drop two hundred, but they're [the state] still going back on this [month's] income."* Thus she had difficulty budgeting money for food. When food was low, she explained, *"Well I just don't eat. I mean, I make sure the kids eat and stuff but I don't always eat…it's just stretching the food."* Trinity admitted that this happened multiple times a week.

The women in the moderate depression pattern talked about feeling strained financially in that money was tight and they worried about paying bills, but the strain seemed less daunting than for the women in the high, worsening and erratic patterns experienced. For one woman in this group, financial problems were tied to a lack of control on her part. She explains, *"I'm not very good with money. If I have money, I just spend it on what's there."* The women in this pattern also did not seem food insecure. Although they may have struggled with money for food and time to cook, they indicated they could always stretch their groceries between pay days.

Financial strains were evident in wave one only for two of the women in the improving

depression pattern. Their financial strain and food insecurity were tied to life circumstances that were only present in the first wave of the study, and resolved by the second wave. In wave one Kami's (age 35) life circumstances were tied to an unhappy marriage in which her husband did not contribute his earnings to support the family. According to Kami, she had to beg him for money for food or bills, yet *"He takes the food out of the kids' mouth for his self. When I buy for the kids he gets it."* When food would get low in her household she would *"...fix my kids something to eat and I won't eat. As long as my kids have something in their stomach I won't eat."* By the second wave of the study, Kami had divorced her husband and was receiving help from her parents. The story was different for Shakira (age 47), who survived mostly on welfare benefits and help from family and friends. She struggled financially and with food insecurity all three years of the study. Financial strain was related to the variability in social security disability, food stamps, and other assistance, which did not coordinate well together, creating food insecurity. She explains, *"I cooked my last grits yesterday morning…I usually run out by the end of the second week but see how many more stamps they done cut off?"* She goes on to explain that, *"they[SSI] gave me a raise for January…give us a dollar raise and they took sixty-five dollar food stamps for that dollar…and they went up on my rent, 60 dollars for that one dollar."* However, even though Shakira struggled financially all three waves, her depression improved after the first wave. Her resilience is likely explained by the level of social support she received from family and friends, which will be described under social support.

Although the mothers in the low depression pattern experienced financial strain, they talked more about the plans they had for improving their financial situation. Their talk was more action oriented. For instance, Reba's (age 34) husband obtained a job off of their family farm to help bring in another income, which put a hardship on getting the farm work done. However,

their children learned to pitch in, *"…They've been used to doing that because…everybody has to fill in, you know, everybody has to."* When their tractor was burned in a fire and needed to be rebuilt, Reba describes how her family worked together, *"My husband and I, we took it all apart, our kids helped, you know, take bolts and stuff off of it…and it was kind of a family thing, and we painted it...and then, there's a lot of satisfaction when you get done."* For Reba, a pile-up of financial issues all related to disasters that happened on their farm. However, the family kept plugging away, tackling one issue at a time, and working together. The women in this pattern also used coping strategies when food was low. Joelle (age 37) relayed that she used the local food pantry, but only for nutritious foods. Reba *"baked from scratch, canned food, and learned how to make things like cheese."* Sometimes she would sell vegetables and homemade goods at a local food market. Jillian's (age 40) strategies were to use coupons, and buy things in bulk or on sale.

**Seeing Themselves as Confident in their Parenting**

In terms of the mothers' sense of parental confidence, the mothers in the low pattern had a significantly higher sense of confidence than the mothers in the high, improving and erratic patterns. Contextually, the mothers in all the patterns talked about similar parenting topics that can be discussed in two broad themes concerning parental confidence: affective aspects and instrumental aspects.

**Affective aspects of parental confidence.** Mothers in the low depression pattern were likely to talk more about both themes than the other mothers; however, they were particularly more likely to talk about the affective aspects. While these mothers discussed stressors in their lives during their interviews, they also were equally likely to talk about their children in ways that conveyed their pride in them, and they talked about fun things they liked to do with their

children. For example, Joelle (age 37) really liked to just BE with her children. She had goals to go to college when her son was old enough to go to Early Headstart. She used the time before going to college to focus on being a mother to her children. She explains, *"What do I do for fun? My life is fun to me. I don't go out. I don't go to clubs…Things that I do that are fun for me are things that I do with my kids. I take them to the park …personally, fun is doing things with them."* She truly enjoyed being a mother, and this time with them was healing after leaving an abusive relationship with her former partner. It boosted her sense of parental confidence.

Pride in their children is another sentiment expressed by the mothers in each depression pattern. For example, Shakira (age 47), with an improving pattern, was proud of her children because *"none of them are on alcohol or drugs, or on the street….and [her adult daughter] hasn't had any kids."* Similarly, Trinity (age 39), with a worsening pattern, was proud of her children and enjoyed watching them learn things, such as *"watching [her adult son] learn the value of money, and [her daughter] wanting to earn her own money."* Nan (age 42), with a high depression pattern felt that the enjoyable part of parenting is *"the rewards when they do something the first time and you get to see it or their grades or just telling about their day. That's my high."*

**Instrumental aspects of parental confidence.** The mothers in the low depression pattern also talked more about the instrumental aspects of raising children that gave them a sense of parental confidence. For mothers in the low pattern, guiding their children and understanding development as their children grew were two main facets of this theme. For example, Reba (age 34) home schooled her children, and as they were mature enough, she also guided them through the process of raising, investing, and selling their own farm animals:

*"The kids have cows in the herd....Every year we've started one out in 4-H…*

*eventually when they get old enough, they can sell the cows, they'll have some money, they'll have an investment…[her daughter] owns four head now…she sold one bull calf this winter, that money went in her savings."*

Reba also felt a sense of parental confidence in the way she guided them through heart-breaking times, such as the death of one of their animals. Reba felt the best part about being a parent was *"shaping young people."* Similarly, Jillian (age 40) enjoyed *"teaching the kids to be self-reliant and help around the house…and teaching the value of working, earning money, saving, and tithing."* The mothers in the low depression pattern seemed to have the emotional and mental resources to provide guidance as an instrumental aspect of parental confidence.

The mothers in the other depression patterns were more likely to discuss the instrumental aspects of parenting confidence in terms of monitoring, disciplining, and daily parenting tasks. This suggests a different orientation toward guidance than the mothers with low depression. It seemed as though these mothers had less of an emotional reserve, such that their confidence stemmed from ensuring their children were behaving well, doing what they were supposed to do, and getting daily needs met. For example, when asked about her parenting strengths, Nan ( age 42), who had a high depression pattern, responded, *"Screening their TV watching….and making sure that they're clean and fed and that they know how to read and do the best that they can. That's all I want from them. I don't really ask for much and that's all I expect from them."* For Jade (age 33), also with a high depression pattern, discipline was important to parenting, *"I like to have fun with them, but I also want them to know that when it's time for homework and it's not acceptable to be back-talking and stuff like that."* Shakira (age 47), with an improving pattern, felt confident in her parenting because she *"always tries to cook nutritious meals"* for her children. Because she was a nursing student, Louanne (age 22), with a moderately depressed

pattern, expressed that she *"likes to be educated on child development, safety, and stuff."* She felt that this helped her to be a patient mother.

**Social Support for the Parenting Role**

Parental support has been defined in the Rural Families Speak study as social support that the mother perceived she receives to support her in the parenting role. The post hoc analyses once again reveal that mothers with a low depression pattern reported the highest perception of parental support, while mothers with a high depression and erratic patterns reported the lowest perceived support.

The mothers from the low depression pattern talked about a variety of sources of support, both formal and informal. Formal sources for this sample tended to be social service agencies, community agencies such as domestic violence centers, organizations that help out at Christmas time, the farmer's market, and physicians. Joelle (age 37) often turned to the domestic violence shelter for support when she first moved to town, and when her car broke down she received help paying for the repairs from several community agencies. Reba (age 34) liked to go to the local farmer's market because it provided space to sell produce, as well as an opportunity to meet new friends. Jillian (age 40) felt supported by the specialist who worked with her daughter who had attention deficit disorder. She appreciated his expertise, and especially the way he and she worked together on her daughter's progress.

Faith was an important aspect of parental support for the mothers with a low depression pattern in two ways. The first was the support network from church members and Bible study groups. Jillian described an incident when she was bedridden from an illness, *"Shoot, when I was off work, people from the church were bringing food all the time…they brung soups, and all kinds of stuff."* The second way that faith was important was the support these mothers

perceived directly from God. For example, each time Joelle told a story about someone helping her, she thanked God, and called those efforts of help blessings. Reba exclaimed, after telling about difficult times on the farm, *"our faith has played a big part of that, relationship with God…without that in our life, um, I really don't know where we would be."*

There were several types of informal supports also available to the mothers in the low depression pattern. Common sources were spouses/partners, parents, and other family members. What seemed significant to the mothers in this pattern were the mutually supportive relationships they built with neighbors and close friends. This type of support was talked about often during their interviews. For example, when Joelle's car was in repair, she would borrow her neighbor's car and barter gas money for running errands. She explains:

> *"[I] told him, 'I know I ran your gas down, going back and forth, so do you want me to give you $5, or do you want me to put it in the tank?' He tells me, 'You can go ahead and put it in the tank.' He needed milk, and I needed milk, so he says, 'Why don't you just take the car?' So I took the car, and went and got milk for [her son], bought milk for him, and put the gas in."*

Reba's neighbors were particularly supportive when her husband had to drive a truck for a living:

> *Our neighbor comes up probably two or three times during the week. It was really nice, Monday night he invited us down to his house. We went down for a pizza party…he comes up on weekends, usually Sunday morning, gets donuts for us, over to Casey's in Banker City. That's been a weekly thing for the past year."*

According to the MANOVA results the mothers with a moderate depression pattern had a mean score for parental support that was very similar to the mothers in the low depression

pattern (29.4 vs. 29.8 respectively). Despite this result, two of the mothers in the moderate pattern spoke very little about social support. For example, Louanne (age 22) felt closer to an older couple she lived near than she did to her partner or her parents. During her second interview she said she felt like *"I'm doing it all myself."* Becca (age 23), on the other hand, said her mother was important to her because she's *"always there for me,"* and by the third wave she felt her partner was more supportive than she had reported in earlier waves. However, there was a stark contrast between these two mothers and the mothers with a low depression pattern. Whereas the mothers with low depression pattern spoke of supportive relationships as part of their daily lives, these two mothers spoke little about such relationships.

The exception to the story of parental support for the moderate pattern was Tomasa (age 32), a Mexican origin woman who was a migrant farm worker during wave one, but had settled by the second wave. She was very close to her husband and daughter, as well as her parents and relatives, and felt upset when she could not see them on a daily basis. The mutually supportive relationships she had with her family were a big part of her daily life. For example, her parents drove her daughter home after school every day, and Tomasa stopped by her parents' house twice a day to give her mother insulin injections.

Quantitatively, the mean score for parental support for the improving and worsening depression patterns were similar and not statistically significantly different (26.1 and 27.1 respectively). However, the stories of support were qualitatively different. For two of the women with an improving pattern, the sources and numbers of support varied, however, the common theme among these women was that there was a significant life stressor or crisis in which support systems encompassed the mothers in a supportive safety net. Once the stressor was resolved, their support systems stabilized. The case of Gabby, a 38 year old single mother

of three boys, exemplifies the analysis. During wave one she relied on several neighbors to provide child care so she could hold a job. They had a mutually supportive system in that she often baked for neighbors in exchange for child care for her sons. However, when her oldest son fell into legal trouble, stress was high and her support system rallied:

> *Because of my oldest one. I lost it last week. I mean, if it wouldn't have been for Diane and a couple of the neighbors around here, I don't know what I would have done…. I'm laying in friends, lots of friends over here …Oh there're still here, trust me! I had to write down my work schedule from day to day…if I don't show up at their house at least once during the day, night, whatever, they're down here wanting to know what I was doing.*

Analysis of Shakira's (age 47) interviews, on the other hand, provides a different perspective about the role of social support. Across all three interviews Shakira's stressors remained the same. She had many health problems and financial stressors, and her interviews revealed that she was food insecure each year. The difference for her was that for wave one, she lived at her mother's home to take care of her during an illness, so Shakira was not near her vast support network. She was isolated during the first wave and her depression scores were high. Her depression scores were lower the second and third year, despite a multitude of stressors (including a house fire). The only difference was that she had steady access to multiple sources of formal and informal supports throughout her community, such as extended family, friends, church members, neighbors, school teachers and counselors, and the Red Cross. Shakira had a knack for garnering support, and her second and third interviews were full of lengthy examples.

For the women in the worsening pattern, the support they received seemed steady throughout the study and similar to the support that mothers in other depression patterns

discussed. For example, Trinity (age 39) describes her relationship with a close friend:

> *"Annette, my neighbor down the street…is always, always, been there through the good, through the bad. You know…we can confide in each other and everything and she's the one I go to if I need that roll of toilet paper or cough drops or something. And, and I do things for her, she does things for me, you know…And it's a friendship you don't find very often anymore."*

However, despite the support they received, the depression scores worsened over the course of the study for the mothers in this pattern as their life stressors worsened (e.g., health problems, financial strain, food insecurity).

The mothers in the high depression pattern had the lowest mean score for parental support of all the depression patterns (20.7), yet contextually, they talked about the support they received from their networks more than the mothers in the erratic pattern (26.1). Nan (age 42), for example, relies on neighbors to keep an eye on her and her children, such that she felt they were a second family. The mothers in the erratic pattern had only a few family members or close friends on which they could rely for support. For example, Abiona, a 34 year old married African American mother, explains that, *"[Her husband] is always there and I haven't had no one else."* Sancha, a single mother of Mexican origin, talked about the support she received from her parents *"they help me [with taking care of her daughter], but for moral support and stuff like that, they're not really…there."*

## Discussion

The present study employed a mixed methods design to link a risk and resilience lens with components of Bronfenbrenner's Process-Person-Context-Time (PPCT) model (1986, 1989, 1994, and as discussed by Tudge, Mokrova, Hatfield & Karnik, 2009). While much of the

developmental and resilience literature has focused on the child, this research is unique in its use of ecological and resilience frameworks to investigate resilience processes of the mothers as the developing individual of interest. MANOVA and MANCOVA procedures provided insight into how the risk and protective factors organize themselves amid depression patterns of this sample of rural low income women. Qualitative analyses provided insight into the context of the lives of the mothers in the sample and provided a partial explanation for the organization and interrelationships of the risk and protective factors.

One of the most important contributions of this study is the way quantitative and qualitative analyses together highlighted the complex proximal processes involved in the interplay between characteristics of the mothers (depression pattern, health problems, and perceptions of parental confidence), and characteristics of the context (child health problems, financial strain, family food insecurity, social support). These findings were most compelling when considering the cumulative and interactive effect of risk factors for mothers in higher risk depression patterns. From a resilience stand point, this study shed light on the various ways that protective factors, such as sense of parental confidence and social support, were important to mothers in each depression pattern.

**Multiple Risks are Related to Multiple Morbidity**

There is a complex relationship between depression and health, financial strain and food insecurity, and this was especially the case for the mothers with high, worsening and erratic depression patterns. Consistent with the multimorbidity concept (John, Kerby, & Hennessy, 2003) the mothers in these patterns experienced multiple physical health problems, as well depression over the course of the three waves of the study, and for many of the women, health and depression problems increased together over time. This is consistent with Moussavi,

Chatterji, Verdes, and Tandon, and colleagues (2007), who found that the presence of depression is associated with worsened health outcomes. This study provided insight into how that can happen when considering the daily lives and struggles of the mothers in this sample. For example, the findings shed light on the importance of financial strain and food insecurity to the complex relationship between health and depression, and supports earlier findings from Rural Family Speak studies (Dolan, Richards, Sano, Bauer, & Braun, 2005; Olson, Anderson, Kiss, Lawrence, & Seiling, 2004). That is, because the mothers have multiple health problems and experience depression, they are unable to maintain steady employment to provide an income with which to feed their families consistently. This contributes to an ongoing sense of financial strain. For these women, qualification for social security disability benefits is elusive and the time clock associated with welfare reform is an intimidating presence.

**Depression and the Role of Parental Confidence**

Qualitative analyses revealed two dimensions of parental confidence that seemed to have relevance for the depression patterns, an affective dimension and an instrumental dimension. For instance, mothers in the low and improving patterns talked about both dimensions of parental confidence in their interviews, with a majority of stories related to affective aspects of loving their children, spending time with them and guiding them. However mothers in the high, worsening and erratic patterns spoke more about the instrumental dimension of parental confidence, particularly disciplining and monitoring activities that would ensure their safety and acceptable behavior. From a resilience perspective this makes sense. The pile-up of stressors these women experienced (multiple risks and multimorbidity), is likely to influence their perceptions about their capabilities and resources. In the resilience literature, subjective appraisals of capabilities are important for balancing life demands (Masten & Powell, 2003;

Patterson, 2002a, 2002b). For women in the higher risk patterns, their sense of parenting capabilities may be tied to teaching their children good manners and behavior, and how to survive stressful living conditions.

**Depression and its Complex Relationship with Social Support**

Classic research on the stress process (Pearlin, Menaghan, Lieberman, & Mullan, 1981) suggests that social supports act to buffer depression indirectly by reinforcing self-concepts and are beneficial to those who need support most. However, findings from this study suggest that social support is beneficial in various ways for those who perceive that they receive it and know how to actively tap into it. This was clearly observed in the women with low and improving depression patterns. The social support these women received seemed to reinforce their confidence. Further, under stressful circumstances, there was mutual interaction between the women and their support systems, such that the women directly tapped into support systems, and their systems rallied for them.

Interestingly, the relationship the women in the moderate pattern have with social support is more consistent with negative attachment cognitions of depressed individuals (Bell, 2009; Hammen, 2006) in that they did not perceive that they received social support, nor did they report actively pursuing or tapping into such resources. When comparing women in the low and improving patterns with women in the moderate depression pattern, Bronfenbrenner's Process-Person-Context-Time model (PPCT) (as discussed by Tudge, Mokrova, Hatfield & Karnik, 2009), may help explain the differences. Specifically related to the *Perso*n in the model, he proposed that individuals possess characteristics which determine how interactive an individual will be with environments, and include temperament, motivation and persistence. Motivation is an important characteristic into which an individual can tap to influence her own development

and change the environment. Similarly, but from a resilience perspective, Masten and Powell (2003) list several *characteristics*, or *attributes*, the developing individual possesses that help to outweigh risks and counterbalance adversities. Findings from this study suggest that women in low and improving patterns possess the motivation and resilience characteristics to tap into and receive social support, whereas the women in the moderate pattern may not possess those characteristics.

The findings for women in the high and worsening patterns indicate that they perceive and tap into social support systems; however, their risk circumstances (high depression scores, multiple health problems, children with health problems, financial strain and food insecurity) outweigh the beneficial effects of social support. Additionally, the connection between a history of abuse and depression cannot be ignored for women in the high depression group. According to theories of interpersonal vulnerability to depression (Hammen, 2006; Herzberg, Hammen, Burge, Daley, Davila & Lindberg, 1999), early attachment experiences and dysfunctional relationships have been shown to be associated with depressed persons' perceptions of social support. It is possible that the abuse they endured earlier in life contributed to a sense of helplessness, such that a feeling that "nothing will help" can limit the effectiveness of any protective factors, such as parenting confidence or social support.

**Limitations**

Categorizing the sample into depression patterns and using a mixed methods design provided a unique contribution to the literature on maternal depression, as well as the literature on risk and resilience. However there are limitations to the study. First, the number of depression patterns employed, combined with a limited sample size provided for small cell sizes,

particularly for the high depression pattern. Small cell sizes limited statistical analyses that might have considered interactive effects. Future studies should consider a categorization scheme that would reduce the number of depression patterns, or employ a larger sample to ensure power to conduct more sophisticated analyses.

Second, while the CESD (Radloff, 1977) is commonly used to measure depression in the general public, it may be useful to use an instrument designed for clinical samples, such as the Beck Depression Inventory. Some of the characteristics of women in the moderate depression pattern were consistent with interpersonal and cognitive theories of depression, particularly the perceived lack of social support. It may be that the nature of the CESD does not detect persistent depression that may be more consistent with interpersonal and cognitive vulnerabilities.

Last, purposive sampling including three extreme cases for the qualitative analyses enabled rich exploration and shed light on the relationship between depression patterns and common risk and protective factors; however the small sample within each pattern may have limited theoretical saturation. Future studies could expand such investigations to include larger samples within each pattern. Conversely, future studies also could focus sampling frames to explore contextual nuances of depression patterns that may be identified among other populations, such as fathers, urban populations, ethnic and minority populations, and specific age groups. Despite the stated limitations, the compelling findings using mixed methods and a longitudinal depression categorization have implications for further studies with larger samples.

**Implications for Policy, Practice and Research**

The complex relationship between depression, maternal health problems, child health problems, financial strain, and food insecurity indicates a need for better coordination of policies, services, and programming for depressed mothers and their families. Better policies are needed

for determining disability benefits when multiple risk and multimorbidity is present. The U.S. Department of Health and Human Services has stated that major depression is the leading cause of disability in the United States (1999), yet there were depressed mothers in this sample with multiple health problems who could not qualify for disability benefits. Policies that simplify forms and processes may help physicians assist and advocate for their patients.

Better communication systems between medical and social service agencies also need to be developed to help identify gaps in services and connect patients/clients with more effective formal and informal support systems. That depression and health problems, especially health problems that are manifested in chronic pain, are highly interrelated points to a need to educate physicians and other health and social service professionals on the importance of consistent screening for depression among patients with multiple health problems, and to screen parents of children who have multiple health problems. Previous findings from the Rural Families Speak project indicate that rural low-income mothers are less likely to self-report depression (Simmons & Huddleston-Casas, 2007), which suggests that many of these women do not get education on access to services that may help them and their families.

For the mothers in this study, a sense of parental confidence and perceived social support were important protective factors. Therefore, it is important that parent and family life education programs assist mothers who experience depression with identifying and tapping into parenting strengths and support networks. The findings also have implications for a collaborative role for educators to work with community agencies and policymakers to improve accessibility and outreach to better engage depressed mothers and their families.

An action-oriented focus of "tapping into" internal strengths and external supports points to the interactive nature of development (Bronfenbrenner, as discussed by Tudge, Mokrova,

Hatfield & Karnik, 2009) and resilience processes (Masten & Powell, 2003) and emphasizes an empowered, active role in mothers' own parental growth. The findings have implications for research to further explore possible dimensions to parental confidence and social support and their relationship to resilience processes, both at individual and family levels.

## Conclusions

A strength of this study was the use of a mixed methods and longitudinal design to gain a better understanding of the ways risk and protective factors organize themselves among longitudinal depression patterns. The findings contributed to a better understanding of the complex relationship among and between risk and protective factors for mothers with depression, and particularly highlighted the interrelationship between depression and health problems. Also highlighted in the findings was the interactive nature of personal characteristics for garnering and tapping into internal and external sources of strength to off-set or cope with stressful life circumstances.

# CHAPTER 5
# DISCUSSION OF THE TWO STUDIES

## Introduction

This dissertation had two specific purposes: to explore the context and distribution of risk and resilience factors among six depression patterns identified in a sample of rural low-income mothers over three waves of data; and to connect individual resilience and family resilience approaches. The six depression patterns identified included:

- "Stable low" pattern, which consisted of mothers who reported depressive symptoms consistent with categories one and two (nondepressed and mildly depressed), and who remained in those low categories across time (low → low → low).
- "Stable moderate" pattern consisted of mothers who reported depressive symptoms in the moderately depressed range over time (mod → mod → mod).
- "High depression" pattern consisted of mothers whose depression remained in the severely depressed category across all three waves (high → high → high).
- "Worsening depression" consisted of mothers experiencing few depressive symptoms during the first wave, but more severe depressive symptoms over the next two waves (low → high → high).
- "Improving depression" consisted of mothers who experienced high depression the first wave, but reported fewer symptoms by the third wave (high → low → low).
- "Erratic depression" was an irregular pattern where symptom levels changed dramatically each year of data collection (e.g. very high → very low → very high).

Common risk and protective factors for maternal depression have been identified in the literature on depression (e.g., Brown, Brody & Stoneman, 2000; Casey, Goolsby, Berkowitz,

Frank et.al., 2004; Coiro, 2001; Dennis, Parke, Coltrane, Blacher, & Borthwick-Duffy, 2003; Ennis, Hobfall & Schroder, 2000; Jackson, 1998, 1999; Jackson & Huang, 1998; Ross, 2000; Siefert, Heflin, Corcoran, & Williams, D. 2004; Taylor, Rodriguez, Seaton, & Dominguez, 2004) and among several studies stemming from the multi-state Rural Families Speak Project (e.g., Bulock, 2004, 2007; Dolan, Richards, Sano, Bauer, & Braun, 2005; Garrison, Marks, Lawrence & Braun, 2004; Islam, 2004; Kim, Seiling, Stafford & Richards, 2005; Olson, Anderson, Kiss, Lawrence, & Seiling, 2004). Similar risk and protective factors were identified in the present studies of rural low-income mothers. However, the mixed methods, contextual nature of these studies revealed a diverse way with which resilience processes unfolded among rural low-income families in which mothers experienced differing patterns of depression.

Study 1 used a grounded theory approach and revealed *Sources of Strength* (positive perspective, parenting strengths, perceived family strengths, resourceful partner/spouse, social support, permanent employment, and investing in self) and *Sources of Stress* (financial strains, negative life events, negative outlook, stressful relationships, low perceived access to social support, pile-up of health problems, "getting the run-around," and history of abuse) as higher level categories that pulled the data together during the axial coding process (LaRossa, 2005). Although these higher level categories reflected common themes across the depression patterns, the individual and family processes involved revealed that the *Picture of Resilience* for each depression pattern differed.

In Study 2 MANOVA and MANCOVA procedures were used to determine the distribution of common risk and protective factors across the depression patterns. As expected, mothers with low or improving depression patterns revealed more protective factors and fewer risk factors, while mothers in high, worsening and erratic patterns revealed fewer protective

factors and more risk factors. MANCOVA results suggest that social support and economic strain play mediating roles in the relationship between the depression patterns and the other factors. More interesting findings surfaced when contextual analyses revealed the complex interactions among risk factors for women in the high, worsening and erratic patterns.

The two mixed methods studies used the same quantitative and qualitative datasets, and the same subsample for qualitative analyses, and presented findings that were both similar to one another and distinct. One of the most important contributions of this dissertation is the way the combination of quantitative and qualitative analyses highlighted the complex proximal processes involved in the interplay between characteristics of the mothers (depression pattern, health problems, and perceptions of parental confidence) and characteristics of the context (child health problems, financial strain, family food insecurity, social support, perceptions of family strengths and resourceful spouses) (Bronfenbrenner as discussed by Tudge, Mokrova, Hatfield & Karnik, 2009). These findings were most compelling when considering the cumulative and interactive effect of risk factors for mothers in higher risk depression patterns. From a resilience stand point, this dissertation also shed light on the various ways that protective factors, such as sense of parental confidence and social support, were important to mothers in each depression pattern. This chapter will review and integrate the findings, discuss theoretical connections between resilience at the individual and family levels, and then discuss limitations, implications for research, practice and policy, lessons learned, and conclusions.

## Multiple Risks are Related to Multiple Morbidity

Study 1 found that, for the women in the three maladaptive patterns, *high, worsening,* and *erratic* depression, each source of stress (pile-up of health problems, financial strains, stressful relationships, and "getting the run-around") appeared to exacerbate the others. It was as if these

women were caught up in a swirling vortex of unbearable stressors. The findings for Study 2 were similar and found that the complex relationship between depression and health and financial strain also involved food insecurity for the families. Consistent with the multimorbidity concept (John, Kerby & Hennessy, 2003) the mothers in these patterns experienced multiple health problems, as well depression over the course of the three waves of the study, and for many of the women, health and depression problems increased together over time. This is consistent with Moussavi, Chatterji, Verdes, and Tandon, and colleagues (2007), who found that the presence of depression is associated with worsened health outcomes. The two studies provided insight into how that can happen when considering the daily lives and struggles of the mothers in this sample. For example, the findings shed light on the importance of financial strain and food insecurity to the complex relationship between health and depression, and supports earlier findings from Rural Families Speak studies (Dolan, Richards, Sano, Bauer, & Braun, 2005; Olson, Anderson, Kiss, Lawrence, & Seiling, 2004). That is, because when mothers have multiple health problems and experience depression, they are unable to maintain steady employment to provide an income with which to feed their families consistently. This contributes to an ongoing sense of financial strain. For these women, qualification for social security disability benefits is elusive, and the time clock associated with welfare reform is an intimidating presence. Experiences with health and social service agencies compounded the stress for these women and led to a sense that they were "getting the run-around."

The metaphor of a "swirling vortex" highlights the additive, interactive, and possibly reciprocal process nature of risk and resilience, compared with past studies that employed a pile-up-of-stressors metaphor (McCubbin & Patterson, 1983; Wickrama, Surjadi, Lorenz, Conger &

Walker O'Neal, 2012). This metaphor also provides a visual reminder of how difficult it can be for families facing significant adversity to move forward.

### Intentional Activation of Sources of Strength

The two most important sources of strength common to both studies were parental confidence and social support. This was true for all the women across the depression patterns. However, the manner in which these sources of strength were activated differed by depression pattern. For example, Study 1 revealed that the women in the two bonadaptive patterns, *stable low* and *improving depression*, and their families faced serious adversities in their lives. However, the sources of strength evident in these women and their families (parental confidence/strengths, perceived family strengths, resourceful spouse, investing in self, and social support) could be characterized as tools that were activated intentionally by the women (and their spouses or partners) to keep their families working together and moving in a forward direction.

Study 2 revealed two dimensions of parental confidence that seemed to have relevance for the depression patterns, an affective dimension and an instrumental dimension. For instance, mothers in the low and improving patterns talked about both dimensions of parental confidence, with a majority of stories related to affective aspects of loving their children, spending time with them and guiding them. However mothers in the high, worsening and erratic patterns spoke more about the instrumental dimension of parental confidence, particularly disciplining and monitoring activities that would ensure their safety and acceptable behavior. From a resilience perspective this makes sense. The pile-up of stressors the women in the high, worsening and erratic patterns experienced (multiple risks and multimorbidity) is likely to influence their perceptions about their capabilities and resources. In the resilience literature, subjective appraisals of capabilities are important for balancing life demands (Masten & Powell, 2003;

Patterson, 2002a, 2002b). For women in the higher risk patterns, their sense of parenting capabilities may be tied to teaching their children good manners and behavior and how to survive stressful living conditions.

Classic research on the stress process (Pearlin, Menaghan, Lieberman, &Mullan, 1981) suggests that social supports act to buffer depression indirectly by reinforcing self-concepts, and are beneficial to those who need support most. However, findings from both studies, but especially Study 2, suggest that social support is beneficial in various ways for those who perceive that they receive it and know how to actively tap into it. This was clearly seen in the women with low and improving depression patterns. The social support these women received seemed to reinforce their confidence. Further, under stressful circumstances, there was mutual interaction between the women and their support systems, such that the women directly tapped into support systems, and their systems rallied for them (Thoits, 2011).

The findings for women in the high and worsening patterns indicate that they perceive and tap into social support systems as well; however, their risk circumstances (high depression scores, multiple health problems, children with health problems, financial strain, food insecurity, and "getting the run-around" from formal sources of support) outweigh the beneficial effects of informal social support. Additionally, the connection between a history of abuse and depression cannot be ignored for women in the high depression group. According to theories of interpersonal vulnerability to depression (Hammen, 2006; Herzberg, Hammen, Burge, Daley, Davila & Lindberg, 1999), early attachment experiences and dysfunctional relationships have been shown to be associated with depressed persons' perceptions of social support. It is possible that the abuse they endured earlier in life contributed to a sense of helplessness, such that a

feeling that "nothing will help" can limit the effectiveness of any protective factors, such as parenting confidence or social support.

**The Puzzle of the Women in the Moderately Depressed Pattern**

Study 1 revealed that two of the women in the *moderate* depression pattern were qualitatively unique in their resilience processes in that they reported the fewest and least adverse *sources of stress* as well as the fewest *sources of strength*. The negative outlook on life they possessed may be more consistent with theories of cognitive and interpersonal vulnerabilities to depression. Negative cognitions may lead them to ruminate about negative events or stressors in their lives (Abramson & Alloy, 2006; Gotlib & Joorman, 2010; Joorman, 2009), which may prevent them from identifying possible solutions and moving forward. Their perceptions of having low levels of support available to them, and "doing it all alone" may be consistent with dysfunctional interpersonal schemas (Hammen, 2006; Hammen, Burge, Daley, Davila, Paley & Rudolph, 1995), and may explain why these women did not actively engage support networks to help off-set their stressors.

The findings from Study 2 were similar for these women, and further suggested that the relationship the women in the moderate depression pattern have with social support is consistent with negative attachment cognitions of depressed individuals (Bell, 2009; Hammen, 2006) in that they did not perceive that they received social support, nor did they report actively pursuing or tapping into such resources. When comparing women in the low and improving patterns with women in the moderate depression pattern, Bronfenbrenner's Process-Person-Context-Time model (PPCT) (as discussed by Tudge, Mokrova, Hatfield & Karnik, 2009), may help explain the differences. Specifically related to the *Perso*n in the model, he proposed that individuals possess characteristics which determine how interactive an individual will be with environments,

and include temperament, motivation and persistence. Motivation is an important characteristic into which an individual can tap to influence her own development and change the environment. Similarly, but from a resilience perspective, Masten and Powell (2003) list several *characteristics*, or *attributes*, the developing individual possesses that help to outweigh risks and counterbalance adversities. Findings from this study suggest that women in low and improving patterns possess the motivation and resilience characteristics to tap into and receive social support, whereas the women in the moderate pattern exhibit characteristics consistent with cognitive and interpersonal vulnerabilities to depression, including negative attachment cognitions.

That their depression scores stayed in the moderate range over the course of the study is puzzling, but it is possible that they had not encountered a negative life event traumatic enough to trigger higher levels of depression (Levinson, 2009). It is also possible that the instrument used to measure depression in community-based samples (the CES-D, Radloff, 1977) did not capture enough depressive symptoms to adequately characterize depression in these women. Last, there may be a developmental aspect not considered in the analyses. These two women were the youngest in the qualitative sample. Further research with larger samples should include age as a developmental variable to be explored in relation to moderate depression and vulnerabilities to depression, and perhaps in relationship to early motherhood.

### A Cultural Role in Resilience Processes

Findings from Study 1 indicate that there was a cultural factor that seemed to play a role for the two women in the study who were of Mexican origin. Family togetherness (familismo) is an important cultural value for Latino families and has been shown to play a role in their sense of resilience (Parra-Cardona, Bulock, Imig, Villarruel & Gold, 2006). However, family

togetherness was a major source of stress for both of these women, and for two very different reasons. Nostalgia for migrant life when she worked with her family on a daily basis contributed to Tomasa's sense of having mixed feelings about life satisfaction, despite her educational attainments and her family's improving financial situation. Sancha, on the other hand, felt constrained by her family and the level of control they exerted over her and her daughter. She seemed to feel conflicted by a desire to pull away from her family and feel independent, and a sense of duty and obedience to the cultural value. The disparate stories of these two women around a central cultural value highlights the complexity of influences cultural values can have on families, and how important they are to the resilience process (Parra-Cardona, Bulock, Imig, Villarruel & Gold, 2006). This is consistent with Ungar's (2010) recommendation that culture and context play a central role in research and practice when working with ethnic and minority populations. For instance, concepts and variables such as life satisfaction and social support may need to be conceptualized differently to include key cultural values (Raffaelli, Tran, Wiley, Galarza-Heras & Lazarevic, 2012) when conducting research with ethnic and minority populations. Perhaps more importantly, the complexity discovered in these analyses suggests a dimensional aspect to this important cultural value that should be investigated further.

## Theoretical Implications

This dissertation offers a unique contribution that begins to theoretically connect resilience at the individual and family levels. Chapter two introduced an ecological and resilience concept matrix, using Bronfenbrenner's Process-Person-Context-Time model as a structural framework. Specifically, the concept matrix ties resilience at the individual level with Bronfenbrenner's ecological model, and resilience at the family level with the Bubolz and

Sontag family ecological model. The concept matrix (Table 5.1) has been revised to incorporate findings from the two studies to illustrate connections.

Table 5.1. Ecological and Resilience Concept Matrix with Study Results

| Bronfenbrenner's Ecological Framework | Concepts from Individual Resilience | Bubolz & Sontag's Family Ecological Framework | Concepts from Family Resilience |
|---|---|---|---|
| Proximal processes: Risk factors and Protective mechanisms with which a mother interacts within the proximal environment | | Resource management and decision making of the rural low-income family: Adjustment, adaptation of a family in response to adversity | |
| • Multiple risks related to multiple morbidity ("swirling vortex of unbearable stressors")<br>• Intentional activation of sources of strength<br>• Cultural roles in resilience processes | | | |
| Person: Characteristics/ attributes of the mothers and their propensity for adaptation to adversity<br><br>• Pile-up of health problems<br>• Negative outlook<br>• Positive perspective<br>• Investing in self<br>• Parenting strengths/confidence<br>• Ability to tap into social support<br>• Puzzle of the moderately depressed mothers | | Family: Capabilities, resources, meanings and beliefs of rural low-income families to respond and adapt to change and adversity<br><br>• Child health problems<br>• Resourceful spouse/partner<br>• Family strengths<br>• Parental confidence | |
| Context: Risk factors and protective factors within the mothers' environment or situation<br><br>• Social support<br>• Financial strain<br>• Food insecurity<br>• Negative life events<br>• Getting the run-around<br>• History of abuse<br>• Stressful relationships | | Environments: Significant risk exposure and protective factors within proximal and distal environments which can affect a low-income rural family's functioning<br><br>• Social support<br>• Financial strain<br>• Food insecurity<br>• Negative life events<br>• | |
| Rural low-income mothers' developmental outcomes over time | | Rural low-income family level outcomes over time | |
| • Rural low-income mothers' depression patterns | | | |

Table 5.1 illustrates that ecological and resilience frameworks share common perspectives on the development of individuals and families. Specifically, they both focus on the abilities and processes of individuals and families as they adapt and change in response to stressors that occur within families and external environments. Resilience theory at the individual and family levels further share common criteria for evidence of resilience. The first criterion is that an individual or family has experienced significant adversity. Second, that the individual or family exhibits competent functioning after experiencing adversity. Last, that resilience is not static or linear. Rather, resilience is a developmental process that occurs over time, and is iterative in nature (see several chapters of Becvar, 2013).

The metaphor of the "swirling vortex of unbearable stressors" (in the top row of Table 5.1), is a poignant illustration of Bronfenbrenner's notion that "progressively more complex reciprocal interaction" takes place as individuals develop within a family context (Tudge, Mokrova, Hatfield & Karnik, 2009, p. 200). This metaphor also illustrates the relationship between risk and resilience processes at the individual and family levels. For example, mothers in the high, worsening and erratic depression patterns were more likely to suffer from multiple health problems, which limited employment options, which was related to financial strain. MANOVA analyses showed that these stressors were related to family level stressors, such as child health problems and food insecurity. Thus, the mothers' risks were related to and likely influenced the risks of the families. However, the qualitative analyses helped to shed light on potential resilience processes taking place among these mothers and within their families in the shared context. Despite their dire circumstances, many of these mothers tried to maintain positive perspectives about their lives, their families, and about themselves as parents. Their strategy to feed the children first when facing food insecurity implies decision making and

resource management capacities, which suggests attempts at adjustment or adaptation at the individual level to promote resilience at the family level.

The other proximal processes identified by the two studies, "intentional activation of sources of strength" and "cultural roles in resilience processes," are further examples of the interactions between characteristics of the mothers, the characteristics of their families and the shared family contexts. "Intentional activation of sources of strength" highlights the notion that resilience is not passive. Rather, it is an active and interactive process. "Cultural roles in resilience processes" supports the limitations that have been recognized in the literature. Current knowledge about resilience relies on White, middle class, majority population assumptions (McCubbin & McCubbin, 2013). The findings related to culture in these current studies reveals that resilience research and theories have not yet discovered the depths of resilience processes of ethnic and minority populations.

The ecological and resilience concept matrix is a model that can be used for further research and theory development. In particular, resource management, decision making, and problem solving are potential avenues of research to explore further the connections between individual resilience and family resilience, particularly when a parent is the developing individual of interest. It makes intuitive sense that parents have the integrity and competent functioning of the family as a goal during times of adversity. The findings from these studies point to the importance of exploring the resilience of parents as individuals who strive for resilience within their families. How parents navigate effective decision making and problem solving for the family is a key link between resilience at the two levels.

Family resilience theorists emphasize that research and family resilience theory development should include the collection of family level data (DeHaan, Hawley & Deal, 2013),

and the use of longitudinal, process oriented quantitative methods, such as configural frequency analysis (von Eye, as discussed in DeHaan, Hawley & Deal, 2013). The results from these two studies suggest that mixed methods approaches are promising when sample sizes are limited, especially when the sample is divided among categories of nominal level variables. The inclusion of qualitative data can highlight family processes that may not be captured from quantitative data, especially such family processes as decision making and problem solving, which can influence resilience at the individual and family levels.

## Limitations

Categorizing the sample into depression patterns and using a mixed methods design provided a unique contribution to the literature on maternal depression, as well as the literature on risk and resilience. Also, this dissertation offers a unique contribution by providing insight into the contextual nuances that distinguished depression patterns among the rural low-income mothers in this study, as well as resilience processes the mothers and their families developed; however it is not without limitations.

First, the family resilience literature suggests that shared meanings of challenges and capabilities among family members are central to the concept of family resilience. Although spouses/partners and children were sometimes present during the interviews, there were only two cases (in this specific sample) in which a spouse or partner contributed information to the interviews. Information obtained from other household members may have provided a better means for observing the processes by which the families created shared meanings and situational appraisals. Their participation may have provided better insight into the effect of the mothers' depression on the family system.

Second, data on depression for this study were obtained from a community-based sample using a self-report instrument (the CES-D, Radloff, 1977) commonly used to measure depression in the general public. While two of the mothers reported that they were taking medication for depression, little is known about the nature of the diagnosis and the lifetime history of depression among the women in the sample. For instance, among the women who did report that they were taking medication, there is no information on who made the diagnosis (primary physician or psychiatrist), how they made the diagnosis (e.g., structured clinical interview versus self-report), or the history and course of their depression (e.g., age at first onset, whether they were currently in a major depressive episode or in recovery, or average length of depressive episodes). Therefore, the findings of this study may not generalize to populations of clinically diagnosed depression. Also, it may be more useful to use an instrument designed for clinical samples, such as the Beck Inventory (Beck, Steer & Garbin, 1988). Some of the characteristics of women in the moderate depression pattern were consistent with interpersonal and cognitive theories of depression, particularly the perceived lack of social support (e.g. Hammen, 2006; and Herzberg, Hammen, Burge, Daley, Davila & Lindberg, 1999). It may be that the nature of the CESD does not detect persistent depression among participants with possible depression vulnerabilities.

Third, the number of depression patterns employed, combined with a limited sample size provided for small cell sizes, particularly for the high depression pattern. Small cell sizes limited statistical analyses that might have considered interactive effects. Future studies should consider a categorization scheme that would either reduce the number of depression patterns, or recruit a larger sample to ensure power to conduct more sophisticated analyses.

Last, purposive sampling including three extreme cases for the qualitative analyses enabled rich exploration and shed light on characterization of the depression patterns, however

the small sample within each pattern may have limited theoretical saturation. Future studies could expand such investigations to include larger samples within each pattern. Conversely, future studies also could focus sampling frames to explore contextual nuances of depression patterns that may be identified among other populations, such as fathers, urban populations, ethnic and minority populations, and specific age groups. Despite the stated limitations, the compelling findings using mixed methods and a longitudinal depression categorization have implications for further studies with larger samples.

## Implications for Research, Policy and Practice

The complex relationship between depression, health problems, child health problems, financial strain, and food insecurity is compelling and is further compounded when participants perceive that they are "getting the run-around" from medical and social service providers. In other words, these rural low-income mothers suffering from multiple morbidity (including depression) and multiple other stressors did not benefit from the support of formal safety nets in their communities. This finding from both studies has implications for research, policy, and better coordination of services and programming for depressed mothers and their families.

First, more research is needed on the relationship between multiple morbidity and disability determination. The Social Security Administration (SSA) follows a multi-step process to determine eligibility for both social security disability (SSD) benefits and supplemental security income (SSI) benefits (Noblitt & Noblitt, 2010). More data are needed about barriers to approval when applicants suffer multiple morbidity involving depression. Primary physicians and psychologists are often called to either provide documentation or conduct a consultative examination (Wittenburg, Steinagle, Frost & Fine, 2012), however, in an assessment of the

consultative examination (CE) process, Wittenburg and colleagues (2012) found that none of the CE providers in their sample were the treating providers in the disability claims. In other words, the health care professionals in their sample who conducted consultations for disability determination did not really know the patients. More research is needed to understand how often primary care physicians and psychologists conduct CEs (compared to providers who are contracted by Disability Determination Services within the states), and the influence that frequency has on approval and denial rates. In addition it would be important to investigate the knowledge and attitudes physicians and psychologists have about multiple morbidity involving depression, the disability determination process, and their roles as advocates for their patients (Gask, 2013; and Simmons, Huddleston-Casas, & Berry, 2007).

Second, the findings of this dissertation are consistent with Moussavi, Chatterji, Verdes, and Tandon, et. al. (2007), who used data from the WHO World Health Survey to determine that depression had the largest effect on worsening health scores compared to other chronic conditions tested. That is, compared to angina, arthritis, asthma and diabetes, "the comorbid state of depression incrementally worsens health compared with depression alone, with any of the chronic diseases alone, and with any combination of chronic diseases without depression" (p. 851). The findings confirm that regardless of causal direction, it is important to consider health problems and the history of depression when disability determinations are made. The U.S. Department of Health and Human Services has stated that major depression is the leading cause of disability in the United States (1999), yet there were depressed mothers in this sample with multiple health problems in addition to depression, who were not approved for disability benefits. The multi-step process that the Social Security Administration (SSA) follows to determine eligibility for SSD and SSI benefits (Noblitt & Noblitt, 2010) is long and exhausting,

and many people are denied. In 2006, only 33.7% of total SSD and SSI applications were granted benefits (Noblitt & Noblitt, 2010). Physicians and other health and mental health professionals are an important part of the determination process. However, despite multiple health and mental health problems, several mothers in this sample reported that they were either denied SSD/SSI benefits, or that their physicians did not advocate for them in the SSD/SSI determination process. Better policies are needed at the federal and state levels to reduce barriers to much needed SSD/SSI resources and create avenues so that physicians may better advocate for their patients.

Third, better communication systems between medical and social service agencies also need to be developed to help identify gaps in services and connect patients/clients with more effective formal and informal support systems, especially in rural areas. That depression and health problems are highly interrelated points to a need to educate physicians (Gask, 2013) and other health and social service professionals on the importance of consistent screening for depression among patients with multiple health problems, and to screen parents of children who have multiple health problems. Previous findings from the Rural Families Speak project indicate that rural low-income mothers are less likely to self-report depression (Simmons & Huddleston-Casas, 2007), which suggests that many of these women do not get education on access to services that may help them and their families.

From an ecological perspective, it may be that women in these communities do not feel valued or heard by health and social service supports. The struggles the women in the present studies described in relation to accessing formal sources of support indicate a need for investigation of gender biases that may be inherent in the decision making policies and practices of health and social service systems, both at the local community level and macrosystem level.

Findings of such an investigation could have implications for more inclusive gender-valued service delivery systems.

Last, it is apparent from the findings from both studies that having a perception of parental and family strengths is important for resilience processes. In addition, perceived social support plays a crucial role in that women and families experiencing bonadaptation actively tapped into strong social support networks, while those experiencing maladaptation perceived themselves and their families as having little to no access to social support. An action-oriented focus of "tapping into" internal strengths and external supports points to the interactive nature of development (Bronfenbrenner, as discussed by Tudge, Mokrova, Hatfield & Karnik, 2009) and resilience processes (Masten & Powell, 2003) and emphasizes an empowered, active role in mothers' own parental growth. It is imperative that clinicians and therapists and family life educators focus on parenting, marital relationships and general relational skills that will empower mothers with depression vulnerabilities to build healthy attachment cognitions and healthy social support systems. Inclusion of family members also is important, particularly spouses or partners, in order to strengthen relational skills and adaptability within the family system. Clinicians and other professionals undertaking such a task must possess a comprehensive understanding of the complex nature of depression and the way it plays out in families.

From a social and health services standpoint, programming and policy that places cultural and contextual understanding at the center of service delivery (Parra-Cardona, Bulock, Imig, Villarruel & Gold, 2006; Ungar, 2010) is important for identifying depressed individuals and families experiencing multiple, interrelated stressors. A cultural lens can help professionals identify ways in which cultural values and experiences may influence clients' perceptions of

formal community supports. In addition, service providers and stakeholders are needed who understand that depression and multiple health problems compound financial stress and exacerbate strains in relationships and family functioning. Physicians sensitive to such issues are helpful when they are willing to complete necessary forms and advocate in court to help connect patients with needed resources (e.g., disability determination forms and hearings). In addition, family life educators placed within health organizations can help individuals and families establish networks of formal support.

## Lessons Learned

The lessons learned in the process of planning, conducting and writing this dissertation research can be discussed from two differing perspectives: the lessons learned from the research process and findings, and the lessons learned in this very personal journey of growth. This section will discuss both.

In terms of the research process and findings, this author found that mixed methods research is an arduous challenge, but well worth the effort. The ways in which the quantitative and qualitative findings complemented each other provided depth, and richness to the dissertation as a whole. Nuances of the mother's lives were highlighted in ways that provided an opportunity to truly connect with the challenges these women faced. Their realities were a reminder that much more needs to be done in this field. One of the findings that this author appreciated was the "action-oriented" way with which many of these women tackled challenges and worked with their families to forge ahead, even when the challenges seemed insurmountable.

In terms of the second perspective of lessons learned, this dissertation proved to be a personal journey for this author that is very much related to the finding just discussed. Perhaps

that is why it was so easy to connect with this sample and with their lives. This author's personal journey of writing this dissertation took much more time than anticipated. Family health problems, employment, and financial issues continuously interfered with progress, beginning shortly after the approval of the dissertation proposal. There were many points in which it was easy to identify with the women in each of the depression patterns, the risk and the resilience. It is in that respect that the theme *pictures of resilience* rings so true when reflecting upon this research, professional and personal journey. Yet the close of this journey signifies the beginning of another exciting adventure.

## Conclusions

The mixed methods and longitudinal design of the two studies provided a methodological structure for analyzing both quantitative and qualitative data in relation to depression patterns identified in this sample of rural low-income women. The findings brought about a better understanding of the ways risk and protective factors organize themselves among longitudinal depression patterns, and valuable insight to the complex nature of depression and the ways patterns of depression can play out in the context of rural low income families.

The design of the studies allowed for unique nuances of resilience processes within each depression pattern to be observed, both at the individual and family levels. The additive and interactive nature of the sources of stress suggested a metaphor of a "swirling vortex," which was especially compelling for women in the high, worsening and erratic patterns. On the other hand, the ability of many of the mothers to actively tap into sources of strength must be emphasized. The findings from both studies illuminated the interactive nature of personal characteristics for garnering and tapping into internal and external sources of strength to off-set or cope with

stressful life circumstances. Additionally, the role that culture played among the two women of Mexican origin brought forth new insight into an important cultural value, familismo, and its relationship with resilience. Together, these findings highlighted nuances of resilience processes that help to build upon a resilience framework.

# APPENDICES

# APPENDIX A

## Wave One Survey Protocol

Interviewer: _____ ID: _____

Date: _____

PARENT INTERVIEW PROTOCOL

YEAR 1

Thank you for agreeing to participate in this important research on family life. As you probably know, we are part of a big study that is looking at how families living in rural parts of the country are managing on a limited income. We are talking to families living in small towns and rural areas all over the United States. Not all of the families we will talk to are currently receiving welfare. In fact, we will talk to some families who have never received cash assistance from the government, but nevertheless have trouble making ends meet each month. There are no "right" answers to any of our questions; we just want to hear what life is like for you and your family. Remember, this interview is voluntary. If you don't want to answer a question, you don't have to. All information you give us will be kept confidential. (Do not proceed unless you have a completed informed consent document.)

Let's begin by talking about who lives in your household. Besides you, who lives in your house?

---

CURRENT HOUSEHOLD COMPOSITION

A. Mother's 1st Name_____ DOB_____

Marital Status*____ Ethnicity** _____

B. Partner's 1st Name_____ DOB_____ Ethnicity**_____

| Child 1st (name) | Sex | DOB | Relation to A*** | Relation to B*** | Contact w/bio parent (Y, N) | Receives child support (Y, N) |
|---|---|---|---|---|---|---|
| 1. _____ | ___ | ____ | _____ | _____ | _____ | _____ |
| 2. _____ | | ____ | _____ | _____ | _____ | _____ |
| 3. _____ | | ____ | _____ | _____ | _____ | _____ |
| 4. _____ | | ____ | _____ | _____ | _____ | _____ |
| 5. _____ | | ____ | _____ | _____ | _____ | _____ |
| 6. _____ | | ___ | _____ | _____ | _____ | _____ |

| * Key to codes | | ** Key to codes | | *** Key to codes | |
|---|---|---|---|---|---|
| S | = Single | W | = Non-Hispanic White | A | = Adopted |
| M | = Married | H | = Hispanic/Latino | SC | = Stepchild |
| LWP | = Living with partner | AA | = African American | B | = Biological child |
| D | = Divorced | N | = Native American | F | = Foster child |
| SEP | = Separated | A | = Asian | NR | = Not related |
| | | M | = Multi-racial | O | = Other |
| | | O | = Other | | |

Do you have any children not currently living with you? (If yes) Who are they, and where are they living?

OTHER HOUSHOLD MEMBERS

| Relationship to A | Length of Time in Household Arrangement | Permanent or Temporary |
|---|---|---|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

Interviewer Notes:

---

LIVING IN THE COMMUNITY

1. Tell me about how this neighborhood/area is as a place to live. Does this neighborhood/area have everything that you and your family need? If not, what sorts of things are missing? (Probe if necessary: Do you have easy access to a grocery store; a mini-mart or convenience store; other household shopping; medical care; a gas station; church; school; child care; a library?)

2. Families may need to know how to find many different services available in the community. The services needed are different for each family. I have a list of resources that are often available in communities. I'd like to know about the kinds of community services you know about. Shall I read the list to you, or would you like to fill this out yourself? *(Administer: Knowledge of Community Resources Measure)*

NOTE: IF THE INTERVIEWEE ASKS YOU TO READ THE MEASURE, ASSUME THAT ALL FURTHER SURVEY MEASURES SHOULD BE READ ALOUD.

3. What's the best thing about living where you do? The worst?

4. Is your housing adequate for you and your family's needs? Why or why not? (Probe: size, quality, price, landlord.)

5. Have you moved in the past two years? If so, why? How does this place compare with where you lived before? (If not addressed) How has your family responded to these changes? How do you feel about this?

6. (Optional, ask if not addressed in #5) Have you ever had a time in the last two years when you and your family were homeless? For how long were you homeless? What did you do? How did you get housing again?

---

1. Let's talk about your employment situation. Are you currently working? (If not employed, skip to Question #2) What do you do? How much are you paid? When did you start working there? How many hours do you generally work each week? How many weeks do you work during the year? Have you ever had a raise? When? How much? (List only current employment; space provided for up to three jobs.)

Participant's Current Employment

| | Wage/salary | Date started | Hours/week | Weeks/year | Amount raise |
|---|---|---|---|---|---|
| Job 1_____ | _____ | _____ | _____ | _____ | _____ |
| Job 2_____ | _____ | _____ | _____ | _____ | _____ |
| Job 3_____ | _____ | _____ | _____ | _____ | _____ |

2. (Ask only if <u>not</u> currently employed) Are you looking for a job now? (If yes) How are you going about it? Have you ever worked for pay? (If answer is no, ask the appropriate questions in this section, but skip work history section)

3. What about your partner? What does your partner do? How much is your partner paid? When did your partner start working there? How many hours does your partner generally work each week? How many weeks does your partner work during the year? Has your partner ever had a raise? When? How much?

Partner's Current Employment

| | Wage/salary | Date started | Hours/week | Weeks/year | Amount raise |
|---|---|---|---|---|---|
| Job 1_____ | _____ | _____ | _____ | _____ | _____ |
| Job 2_____ | _____ | _____ | _____ | _____ | _____ |
| Job 3_____ | _____ | _____ | _____ | _____ | _____ |

4. Is there anyone else in the household who has a job? (If yes) Tell me about that.

5. (Ask if currently employed) What problems, if any, do you currently face at work?

6. (Ask if currently employed) Do you get any benefits from your job(s)? How about your partner? What about health insurance…

| Benefit | Provided by Mother's Job(s) | Provided by Partner's Job(s) |
|---|---|---|
| Health insurance for self | ❑ Yes ❑ No | ❑ Yes ❑ No |
| Health insurance for children | ❑ Yes ❑ No | ❑ Yes ❑ No |
| Sick leave | ❑ Yes ❑ No | ❑ Yes ❑ No |
| Vacation pay | ❑ Yes ❑ No | ❑ Yes ❑ No |
| Overtime | ❑ Yes ❑ No | ❑ Yes ❑ No |
| Retirement plan | ❑ Yes ❑ No | ❑ Yes ❑ No |

7. What would be your ideal job for supporting your family? What would help you to get that kind of job?

8. In the last several years welfare regulations have changed. There is now more of an emphasis on getting a job, and there are now time limits (talk about specific state programs, if appropriate). What do you think about these changes? Has your family been affected by them?

---

WORK HISTORY

1. We also want to know about the kinds of work that people have done in the past. Tell me about your work history. How old were you when you got your first job?

2. About how many jobs do you think you've had since then? Have you been more likely to work full-time or part-time? Why?

3. What kinds of jobs did you have? What were some of the reasons you left these jobs?

4. Tell me about the job that you held the longest, not counting your current job. When did you have this job? What did you do? What did you like about it? Why did you leave?

TRANSPORTATION AND CHILDCARE

1. What about transportation? How do you usually get around? (If not addressed: Do you own a car or have one you can borrow? How do you and your partner get to and from work?)

    a. (If the family has no car) How do you get your groceries, take your children to the doctors, run errands?

    b. (If the family has a car) How reliable is your car? When was the last time your car broke down? What happened?

2. What do you do when you really need transportation and it's not available to you?

3. When you are working (or participating in a job training program or the state's welfare-to-work activities) who takes care of your children? Tell me how you get them there, and about how long they stay every day. Is it different if you have to work evenings or weekends?

4. (If appropriate) What about your older children? What do they do after school? What about school holidays and summers?

5. How many childcare arrangements do you have each week/month? Overall, how much do you pay for childcare each month?

6. How do you like your childcare provider? Why do you feel this way? Have you ever changed providers? Why?

7. Is there ever a time when you need someone to take care of your children outside your time at work? Who does that? How does it go?

8. Tell me about a situation when you needed emergency childcare. What did you do? Have you ever had to miss work or a training program because of a childcare problem? How did your supervisor react?

9. What do you do for childcare if your child gets sick? What happens if your provider is sick?

*Family of Origin Characteristics*

1. Tell me a little bit about your background. What was your family like when you were growing up? Who was in your family? Where did you live? What do you remember about your childhood?

2. Did your parents work? What kind of work did they do?

3. How much education did your mother have? _____ Your father? _____
   1 = 8th grade less
   2 = some high school
   3 = high school or GED
   4 = specialized technical, business or vocational training after high school
   5 = some college, including AA
   6 = college or university graduate
   7= one or more years beyond college
   8= graduate degree
   9 = don't know

4. Do you know if your family ever received welfare or other assistance?
   ❑ Yes ❑ No ❑ Don't Know

5. How often did your family move when you were a child? Why did you move?

6. (Optional) How much contact do you have with your family now? Who are you in contact with? Where do they live? What is your relationship like now?

---

FAMILY WELL-BEING

1. Tell me about a typical day (a working day, if appropriate). What time do you get up? When do your children get up? Then, what happens next? And then…? (The goal here is to get through a typical weekday for the family.)

2. What sorts of things do you do for fun with your family? How often do you get to do them?

3. Overall, how would you say things are going for your family right now? (If not addressed) How are things going for you personally? (If appropriate) How are things going between you and your partner?

4. Here is a checklist that asks about how things have been in the last week. *(Administer: Feelings About How Things Are Going)*

5. Parents need lots of skills to help their families get by. Everyone has certain skills and abilities, but it's usually not possible for someone to have every single skill needed. We'd like to know what sorts of skills you have. (*Administer: Life Skills Assessment)*

6. Family members often have health problems. Sometimes these problems don't have much of an impact on day-to-day life, while at other times they can be a big problem. We'd like to know about any health problems the members of your family might have. *(Administer: Adult Health Survey; Administer: Child Health Survey; use more than one if needed to get info about all children)*

7. (If there are other people living in the household) Do any of the other people in your household have any health problems? (If yes) What kinds of health problems?

8. (If applicable) Do any of these health problems affect everyday life in your family? If so, how?

9. What things about your family make you proud and happy right now? What are the biggest challenges for your family as a whole?

---

EDUCATION AND INCOME

1. What is your current educational level? _____ (use scale below)
   1= 8th grade less
   2 = some high school
   3 = high school or GED
   4 = specialized technical, business or vocational training after high school
   5 = some college, including AA
   6 = college or university graduate
   7 = one or more years beyond college
   8 = graduate degree
   9 = don't know

2. How much education did you have when you first became a parent? ____ (use scale)

3. (If no high school diploma) Why did you leave high school before finishing?

4. (If appropriate) What about your spouse/partner-how much education does he have?____ (scale)

5. In the last few years have you had the opportunity to get further education or develop new job skills? What kind? How were you able to do this?

6. We'd like to know a bit about your family's sources of income. Remember, all of this information is completely confidential. From which of the following sources do you receive income?

| Source of Income | Take Home Pay | Weekly | Bi-Weekly | Monthly |
|---|---|---|---|---|
| Wages and salaries (self) | _____ | ❑ | ❑ | ❑ |
| Wages and salaries (partner) | _____ | ❑ | ❑ | ❑ |
| Tips, commissions, overtime | _____ | ❑ | ❑ | ❑ |
| Social Security Disability | _____ | ❑ | ❑ | ❑ |
| Social Security Retirement/Pensions | _____ | ❑ | ❑ | ❑ |
| SSI (Supplemental Security Income) | _____ | ❑ | ❑ | ❑ |

| Source of Income | Take Home Pay | Weekly | Bi-Weekly | Monthly |
|---|---|---|---|---|
| TANF | _____ | ❑ | ❑ | ❑ |
| Unemployment Compensation | _____ | ❑ | ❑ | ❑ |
| Worker's Disability Compensation | _____ | ❑ | ❑ | ❑ |
| Veterans' Benefits | _____ | ❑ | ❑ | ❑ |
| Child or spousal support | _____ | ❑ | ❑ | ❑ |
| Children's wages | _____ | ❑ | ❑ | ❑ |
| Food Stamps | _____ | ❑ | ❑ | ❑ |
| Regular gifts from family/friends | _____ | ❑ | ❑ | ❑ |
| Other: | _____ | ❑ | ❑ | ❑ |

7. Housing is usually the largest expense for families. Tell me about how much you pay per month and what utilities, if any, are included. Is this a rental or do you own? What utilities do you pay each month? How much? What happens when you can't pay for utilities?

8. Families sometimes receive assistance from a variety of government or private programs. Do you receive assistance from any of the following?

❑ WIC
❑School Lunch Program
❑ EIC (Earned Income Credit)
❑Child Care Assistance
❑ Housing Assistance
❑ Energy/Fuel Assistance
❑ Transportation Assistance
❑ Diversionary Assistance (only some states)
❑ Educational Grants or Loans
❑ Medicaid/ MA
❑ Other

9. Is there any other assistance you're getting, such as help with healthcare, food, meals, clothing, holiday gifts, furniture, baby goods, day care, or school supplies?

| Type of help | Amount | Type of help | Amount |
|---|---|---|---|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

10. Compared to two years ago, would you say your family's economic situation has:

5 = Improved a lot
4 = Improved a little
3 = Remained the same
2 = Gone down a little
1 = Gone down a lot

11. (Optional)To what extent do you think your income is enough for you to live on?

1 = Not at all adequate
2 = Can meet necessities only
3 = Can afford some of the things we want but not all we want
4 = Can afford about everything we want
5 = Can afford about everything we want and still save money

12. In past year, has there been a time when you had a hard time making ends meet or paying for necessities? What did you have trouble paying for? Food? Clothing? Healthcare? Credit payments? Personal care or non-food items? (If appropriate) Diapers? What did you do?

| Item | Yes | No |
|---|---|---|
| Food | ❑ | ❑ |
| Clothing | ❑ | ❑ |
| Medical Care | ❑ | ❑ |
| Dental Care | ❑ | ❑ |
| Medicines | ❑ | ❑ |
| Credit Payments | ❑ | ❑ |
| Personal Care Items | ❑ | ❑ |
| Diapers | ❑ | ❑ |
| School Fees or Expenses | ❑ | ❑ |
| Past Bills: | ❑ | ❑ |
| Other: | ❑ | ❑ |

13. Have you or members of your household ever gone hungry or been close to going hungry? Please describe the situation as fully as you can. What led to it? How did you deal with it?

14. What do you need most to prevent this situation from happening again? *(Administer Food Security Module)*

15. When you've gone for help from an agency, how were you treated? (Probe for specific agencies.)

16. In the past year, have you sold or pawned anything you owned?

PARENTING

1. Let's talk about being a parent. What do you enjoy most about being a parent? What are your strengths as a parent? What is the hardest part of being a parent?

2. (If appropriate) How does your partner help you with parenting?

3. (Optional) Here's another checklist that asks you to describe how you feel about yourself as a parent. *(Administer: Parent Ladder)*

---

SOCIAL SUPPORT

1. Who are the people who are most important to you and your family? By this, we mean friends or relatives who are important to you for one reason or another. For each person ask: Who is this person? Why are they important to you? (If appropriate) How did you meet them? How often are you in contact with them? Is there anyone else?

2. Is there anyone who makes things hard for your family? How so? Tell me about that.

3. Do you ever get to go out with your friends? Have you been able to find the time for any outside activities? What sorts of things do you do?

---

SUMMARY

1. When you look back over the past few years, what do you think are the most important things that have happened to you and your family?

2. Looking ahead into the future, what are you most looking forward to in the coming year? What do you most worry about? What do you think things will be like for your family in three years?

3. Overall, how satisfied are you with your life right now? (Use scale below) Why do you feel that way?

    1 = very dissatisfied

    2 = dissatisfied

    3 = mixed feelings

    4 = satisfied

    5 = very satisfied

4. Is there anything else that you think we should know about how your family is doing right now? Is there anything we've missed?

CONTACT INFORMATION: TO BE REMOVED AND KEPT IN STATE FILES

As you know, we would like to visit with you again in a few months to see how your family is doing. To make it easier to contact you in case you move and forget to tell us, will you share the name and phone numbers of three people who will always know where you are? Please be sure to tell them that we may contact them.

| Name | Phone Number |
| --- | --- |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

Thank you so much for your time.

NOTE

There are many community services that families need to know how to access. The services needed are different for each family. If you needed it, would you know where to go to:

Table A.1. Knowledge of Community Resources

| Service | Yes | No |
|---|---|---|
| 1. Get help on heating bills | | |
| 2. Apply for subsidized housing | | |
| 3. Find temporary housing | | |
| 4. Apply for Medicaid | | |
| 5. Find help for a drug or alcohol problem | | |
| 6. Find help for a domestic violence problem | | |
| 7. Get your child immunized | | |
| 8. Find a family doctor | | |
| 9. Find dental care | | |
| 10 Find a mental health counselor | | |
| 11. Find family planning services | | |
| 12. Apply for welfare | | |
| 13. Get legal assistance | | |
| 14. Apply for food stamps | | |
| 15. Apply for WIC | | |
| 16. Locate job training | | |
| 17. Find transportation choices | | |
| 18. Find child care | | |
| 19. Apply for a child care subsidy | | |
| 20. Find help for a family member with disabilities | | |
| 21. Find low-cost clothing for your family | | |
| 22 Find Cooperative Extension Activities (EFNEP, | | |

Table A.2. Life Skills Assessment

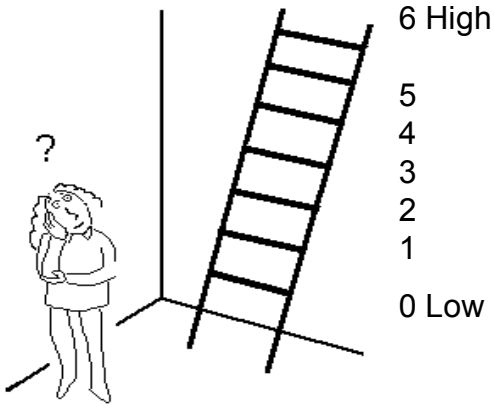
| Do you have: | Yes | No |
|---|---|---|
| 1. A driver's license | | |
| 2. Car insurance | | |
| 3. Car registration | | |
| 4. Heath insurance | | |
| 5. A checking account | | |
| 6. A good credit record | | |
| 7. A local library card | | |
| Do you know how to: | | |
| 8 Manage your bills | | |
| 9 Write a personal check | | |
| 10 Make a family budget | | |
| 11. Stretch your groceries to the end of the month | | |
| 12. Register to vote | | |
| 13. Apply for a credit card | | |
| 14. Prepare a well-balanced meal for your family | | |
| 15. Get telephone service | | |
| 16. Work with your landlord to improve housing | | |
| 17. Register a consumer complaint | | |
| 18. Talk to your child's teacher | | |
| 19. Fill out forms to apply for services | | |
| 20. Apply for a job | | |
| 21. Write a resume | | |
| 22. Dress for a job | | |
| 23. Fill out your own income tax forms | | |
| 24. Join a local club or organization | | |
| 25. Create a personal support system | | |

For each of the following statements, check the box that best describes HOW OFTEN YOU HAVE FELT THIS WAY DURING THE PAST WEEK.

Table A.3. Feelings About How Things Are Going

| | Rarely or none of the time | A little of the time | A moderate amount of time | Most or all of the time |
|---|---|---|---|---|
| 1. I was bothered by things that don't usually bother me | ❑ | ❑ | ❑ | ❑ |
| 2. I did not feel like eating; my appetite was poor | ❑ | ❑ | ❑ | ❑ |
| 3. I felt that I could not shake the blues even with help from my family and friends | ❑ | ❑ | ❑ | ❑ |
| 4. I felt that I was just as good as other people | ❑ | ❑ | ❑ | ❑ |
| 5. I had trouble keeping my mind on what I was doing | ❑ | ❑ | ❑ | ❑ |
| 6. I felt depressed | ❑ | ❑ | ❑ | ❑ |
| 7. I felt that everything I did was an effort | ❑ | ❑ | ❑ | ❑ |
| 8. I felt hopeful about the future | ❑ | ❑ | ❑ | ❑ |
| 9. I thought my life had been a failure | ❑ | ❑ | ❑ | ❑ |
| 10. I felt fearful | ❑ | ❑ | ❑ | ❑ |
| 11. My sleep was restless | ❑ | ❑ | ❑ | ❑ |
| 12. I was happy | ❑ | ❑ | ❑ | ❑ |
| 13. I talked less than usual | ❑ | ❑ | ❑ | ❑ |
| 14. I felt lonely | ❑ | ❑ | ❑ | ❑ |
| 15. People were unfriendly | ❑ | ❑ | ❑ | ❑ |
| 16. I enjoyed life | ❑ | ❑ | ❑ | ❑ |
| 17. I had crying spells | ❑ | ❑ | ❑ | ❑ |
| 18. I felt sad | ❑ | ❑ | ❑ | ❑ |
| 19. I felt that people disliked me | ❑ | ❑ | ❑ | ❑ |
| 20. I could not "get going" | ❑ | ❑ | ❑ | ❑ |

Figure A. 1. The Parenting Ladder




*Where would you put yourself on the Parenting Ladder in terms of:*

Your knowledge of how children grow and develop? _____

Your confidence that you know what is right for your child?_____

Your ability to create a safe home for your child? _____

Your success in teaching your child how to behave? _____

Your skill at finding fun activities that interest your child? _____

The amount of stress in your life right now? _____

Your ability to cope with the stress in your life? _____

Parenting is often smoother when others are there to help. Where would you put yourself on the Parenting Ladder in terms of:

Other parents for you to talk to? _____

Someone to help you in an emergency? _____

Someone to offer helpful advice or moral support?

Someone for you to relax with? _____

Professional people to talk to when you have a question about your child? _____

Your overall satisfaction with the amount of support in your life? _____

ADULT HEALTH SURVEY

Do you and/or your partner have medical insurance?
You Yes_____ No_____
Partner Yes_____ No_____

If yes, what kind?
- Private/HMO
- Medicaid/MA
- State Health Plan
- Other (Explain)

_____

Do you and/or your partner have any type of dental insurance?
You Yes_____ No_____
Partner Yes_____ No_____

If yes, what kind?
- Private
- Medicaid/MA
- Other (explain)

About how many times in the past year have you been to a doctor or other health care provider?
_____
_____

Your partner?_____
____

If none, when was the last time you visited a doctor or health care provider?
_____

Your partner?_____

About how many times in the past year have you visited a dentist?_____

Your partner?_____

If none, when was the last time you did visit a dentist?

---

Your partner?_____

Have you or your partner had any injuries or serious illnesses in the past year?
You Yes _____
No _____
Partner Yes _____
No _____

If yes, please explain
_____
_____
_____

About how many times in the past year have you missed work due to an illness/injury?
_____

Your partner?_____

Have you been pregnant in the past three years
Yes_____ No_____
If yes: How many times_____

Are you and your partner able to have more children?
Yes_____ No_____

If so, do you currently use birth control?
Yes_____ No_____

In the past three years, have you or your partner experienced any of the following health problems?

| | You | Partner | | You | Partner |
|---|---|---|---|---|---|
| Heart Problems | ❑ | ❑ | Joint Problems | ❑ | ❑ |
| High Blood Pressure | ❑ | ❑ | Chronic Pain | ❑ | ❑ |
| Diabetes | ❑ | ❑ | Eating Disorder/ Obesity | ❑ | ❑ |
| Cancer | ❑ | ❑ | Skin Problems | ❑ | ❑ |
| Digestive Problems | ❑ | ❑ | Permanent Disability | ❑ | ❑ |
| Liver Problems | ❑ | ❑ | Sexually Transmitted Disease | ❑ | ❑ |
| Seizure Disorder | ❑ | ❑ | | | |
| Depression/Anxiety | ❑ | ❑ | Reproductive Problems | ❑ | ❑ |
| Anger Management | ❑ | ❑ | Bladder Infections | ❑ | ❑ |
| Hepatitis | ❑ | ❑ | Drug Problem | ❑ | ❑ |
| Allergies | ❑ | ❑ | Alcohol Problem | ❑ | ❑ |
| Asthma | ❑ | ❑ | Tobacco Use | ❑ | ❑ |
| Frequent colds/ flu/sinus | ❑ | ❑ | Anemia | ❑ | ❑ |
| Thyroid Problems | ❑ | ❑ | Emotional, physical, or sexual abuse | ❑ | ❑ |
| Kidney Problems | ❑ | ❑ | | | |
| Fatigue | ❑ | ❑ | Migraines/Headaches | ❑ | ❑ |
| Eye or vision problems | ❑ | ❑ | Learning Disabilities | ❑ | ❑ |
| Back Problems | ❑ | ❑ | Arthritis | ❑ | ❑ |

Other (specify)_____

First name of: Child 1:_____ Child 2: _____
Child 3: _____

CHILD HEALTH SURVEY

Does C1 have medical insurance?
- Private/HMO
- Medicaid/MA
- State Plan
- Other (Explain):

_____
_____

C2: Y Yes Y No If yes, what kind?
- Private/HMO
- Medicaid/MA
- State Plan
- Other (Explain):

_____
_____

C3: Y Yes Y No If yes, what kind?
- Private/HMO
- Medicaid/MA
- State Plan
- Other (Explain):

_____
_____

About how many times in the past year has your child been to a doctor or other health care provider?
C1 _____ C2 _____
C3 _____

If none, when was the last time your child visited a doctor or health care provider?
C1 _____ C2 _____
C3 _____

Does C1 have any type of dental insurance? Y Yes Y No If yes, what kind?
- Private
- Medicaid/MA
- Other (Explain):

_____

C2: Y Yes Y No If yes, what kind?
- Private
- Medicaid/MA
- Other (Explain):

_____

C3: Y Yes Y No If yes, what kind?
- Private
- Medicaid/MA
- Other (Explain):

_____

About how many times in the past year has your child visited a dentist?

C1 _____ C2 _____ C3 _____

If none, when was the last time your child did visit a dentist?

C1 _____ C2 _____
C3 _____

Has your child had any injuries or serious illnesses in the past year?
C1: Y Yes YNo
C2: Y Yes YNo
C3: Y Yes YNo

If yes, please explain_____
_____
_____
_____
_____
_____
_____

About how many times in the past year has your child missed school due to an illness/injury?
C1: _____

C2: _____

C3: _____

In the past three years, has your child experienced any of the following health problems?

| | C1 | C2 | C3 |
|---|---|---|---|
| Allergies | ❑ | ❑ | ❑ |
| Anemia | ❑ | ❑ | ❑ |
| Asthma | ❑ | ❑ | ❑ |
| Cancer | ❑ | ❑ | ❑ |
| Chronic Pain | ❑ | ❑ | ❑ |
| Learning Disability | ❑ | ❑ | ❑ |
| Depression/Anxiety | ❑ | ❑ | ❑ |
| Anger Management | ❑ | ❑ | ❑ |
| Diabetes | ❑ | ❑ | ❑ |
| Digestive Problems | ❑ | ❑ | ❑ |
| Drug Problem | ❑ | ❑ | ❑ |
| Alcohol Problem | ❑ | ❑ | ❑ |
| Ear Infections | ❑ | ❑ | ❑ |
| Eating Disorder/ Obesity | ❑ | ❑ | ❑ |
| Eye or vision | ❑ | ❑ | ❑ |
| Fatigue | ❑ | ❑ | ❑ |
| Frequent colds/flu/ sinus | ❑ | ❑ | ❑ |
| Hepatitis | ❑ | ❑ | ❑ |
| Seizure Disorders | ❑ | ❑ | ❑ |
| Skin Problems | ❑ | ❑ | ❑ |

| | C1 | C2 | C3 |
|---|---|---|---|
| Head Lice | ❑ | ❑ | ❑ |
| Behavior Problems | ❑ | ❑ | ❑ |
| Conjunctivitis (pink eye) | ❑ | ❑ | ❑ |
| ADD/ADHD | ❑ | ❑ | ❑ |
| Fetal Alcohol Effects/ Syndrome | ❑ | ❑ | ❑ |
| Fetal Drug Effects | ❑ | ❑ | ❑ |
| Broken Bones | ❑ | ❑ | ❑ |
| Sexually Transmitted Disease | ❑ | ❑ | ❑ |
| Skeletal Problems | ❑ | ❑ | ❑ |
| Tobacco Use | ❑ | ❑ | ❑ |
| Migraines/Headaches | ❑ | ❑ | ❑ |
| Permanent Disability | ❑ | ❑ | ❑ |
| Other (specify) | | | |

FOOD SECURITY MODULE

These next questions ask about the food eaten in your household in the last 12 months, since (current month) of last year, and whether you were able to afford the food you need.

1. Which of these statements bests describes the food eaten in your household in the last 12 months:

[1] Enough of the kinds of food we want to eat (SKIP 1a and 1b)
[2] Enough but not always the kinds of foods we want (SKIP 1a)
[3] Sometimes not enough to eat (SKIP 1b)
[4] Often not enough to eat (SKIP 1b)
[ ] DK or Refused (SKIP 1a and 1b)

1a. [IF OPTION 3 OR 4 SELECTED, ASK] Here are some of the reasons why people don't always have enough to eat. For each one, please tell me if that is a reason why YOU don't always have enough to eat. [READ LIST. MARK ALL THAT APPLY.]

| YES | NO | DK | |
|---|---|---|---|
| ❑ | ❑ | ❑ | Not enough money for food |
| ❑ | ❑ | ❑ | Not enough time for shopping or cooking |
| ❑ | ❑ | ❑ | Too hard to get to the store |
| ❑ | ❑ | ❑ | On a diet |
| ❑ | ❑ | ❑ | No working stove available |
| ❑ | ❑ | ❑ | Not able to cook because of health problems |

1b. [IF OPTION 2 SELECTED, ASK] Here are some reasons why people don't always have the quality or variety of food they want. For each one, please tell me if that is a reason why YOU don't always have the kinds of food you want to eat. [READ LIST. MARK ALL THAT APPLY.]

| YES | NO | DK | |
|---|---|---|---|
| ❑ | ❑ | ❑ | Not enough money for food |
| ❑ | ❑ | ❑ | Kinds of food we want not available |
| ❑ | ❑ | ❑ | Not enough time for shopping or cooking |
| ❑ | ❑ | ❑ | Too hard to get to the store |
| ❑ | ❑ | ❑ | On a special diet |

2. Now I'm going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true,

sometimes true, or never true for your household in the last 12 months, that is, since last (name of current month).

The first statement is "We worried whether our food would run out before we got money to buy more." Was that often true, sometimes true, or never true for your household in the last 12 months?

- ❑ Often True
- ❑ Sometimes True
- ❑ Never True
- ❑ DK or Refused

3. "The food that we bought just didn't last, and we didn't have money to get more." Was that often, sometimes or never true for your household in the last 12 months?
   - ❑ Often True
   - ❑ Sometimes True
   - ❑ Never True
   - ❑ DK or Refused

4. "We couldn't afford to eat balanced meals." Was that often, sometimes or never true for your household in the last 12 months?
   - ❑ Often True
   - ❑ Sometimes True
   - ❑ Never True
   - ❑ DK or Refused

5. "(I/We) relied on only a few kinds of low-cost food to feed (my/our) child/ren because (I was/we were) running out of money to buy food." Was that often, sometimes or never true for your household in the last 12 months?
   - ❑ Often True
   - ❑ Sometimes True
   - ❑ Never True
   - ❑ DK or Refused

6. "(I/We) couldn't feed (my/our) child/ren a balanced meal, because I couldn't afford that." Was that often, sometimes or never true for your household in the last 12 months?
   - ❑ Often True
   - ❑ Sometimes True
   - ❑ Never True
   - ❑ DK or Refused

If answer "often true" or "sometimes true" to any one of Questions 2-6, or response [3] or [4] to Question 1, then ask questions 7-16, otherwise stop here.

7. "(My/Our child was/The children were) not eating enough because (I/we) just couldn't afford enough food." Was that often, sometimes or never true for your household in the last 12 months?

- ❑ Often True
- ❑ Sometimes True
- ❑ Never True
- ❑ DK or Refused

8. In the last 12 months, since last (name of current month), did you (or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?
   - ❑ Yes
   - ❑ No (Skip 8a)
   - ❑ DK (Skip 8a)

8a. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

- ❑ Almost every month
- ❑ Some months, but not every month
- ❑ Only one or 2 months
- ❑ DK

9. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food?
   - ❑ Yes
   - ❑ No
   - ❑ DK

10. In the last 12 months, were you ever hungry but didn't eat because you couldn't afford enough food?
    - ❑ Yes
    - ❑ No
    - ❑ DK

11. In the last 12 months, did you lose weight because you didn't have enough money for food?
    - ❑ Yes
    - ❑ No
    - ❑ DK

If any answer to Question 7-11 is affirmative, continue, otherwise stop here.

12. In the last 12 months did (you/you or other adults in your household) ever not eat for a whole day because there wasn't enough money for food?
    - ❑ Yes
    - ❑ No (Skip 12a)
    - ❑ DK (Skip 12a)

12a. [IF YES TO 12, ASK] How often did this happen—almost every month, some months, but not every month, or in only 1 or 2 months?

- ❑ Almost every month
- ❑ Some months, but not every month
- ❑ Only one or 2 months
- ❑ DK

13. The next questions are about children living in the household who are under 18 years old. In the last 12 months, since (current month) of last year, did you ever cut the size of (your child's/any of the children's) meals because there wasn't enough money for food?

- ❑ Yes
- ❑ No
- ❑ DK

14. In the last 12 months, did (CHILD'S NAME/any of the children) ever skip meals because there wasn't enough money for food?

- ❑ Yes
- ❑ No (skip 14a)
- ❑ DK (skip 14a)

14a. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

- ❑ Almost every month
- ❑ Some months, but not every month
- ❑ Only one or 2 months
- ❑ DK

15. In the last 12 months, (was your child/were the children) ever hungry but you just couldn't afford more food?

- ❑ Yes
- ❑ No
- ❑ DK

16. In the last 12 months, did (your child/any of the children) ever not eat for a whole day because there wasn't enough money for food?

- ❑ Yes
- ❑ No
- ❑ DK

# APPENDIX B

## Wave Two Survey Protocol

Interviewer_____ ID:_____ Date:_____

PARENT INTERVIEW PROTOCOL

YEAR II

I want to thank you for agreeing to be interviewed again this year. Just like last time, there are no right or wrong answers to any of our questions. We are interested in hearing what life is like for you and your family. I want to remind you that the interview is voluntary. If you do not want to answer a question, you don't have to. All information that you give us will be kept confidential. [DO NOT PROCEED UNLESS PARTICIPANT HAS SIGNED THE INFORMED CONSENT FORM.]

***{NOTE TO INTERVIERWER – ALWAYS ASK QUESTIONS IN OPEN-ENDED MANNER FIRST, DON'T JUST READ OFF A LIST OF YES/NO QUESTIONS. USE THEIR ANSWERS TO THE OPEN-ENDED QUESTIONS TO FILL IN THE YES/NO BOXES AND THEN PROBE WHEN NECESSARY TO GET INFORMATION. PLEASE MAKE SURE THAT YOU FILL IN ALL BLANKS AND CHECK ALL BOXES ON THIS FORM.}***

CURRENT HOUSEHOLD COMPOSITION

Mother's 1st Name_____

We'd like to catch up on any changes in your life and in your family since the last time we talked with you.

*{PULL THE APPROPRIATE INFORMATION FROM THE WAVE 1 INTERVIEW.}*

Last year, you said that

_____

were living in your household.

Is this still true? Yes ❑ No ❑

Is there any one new living in your household? Yes ❑ No ❑

Who? *{FILL IN CHART FOR NEW CHILDREN, FILL IN SECTIONS BELOW FOR PARTNERS AND NON-PARTNERS}*

[IF CHILD MOVED OUT]
When? Why? Where is child living now?

| New Child name) | Sex | DOB | Relation Mother | Relation Partner/ Spouse | Contact w/ bio parent (Y, N) | Receives child support (Y, N) |
|---|---|---|---|---|---|---|
| 1. _____ | ____ | _____ | _____ | _____ | _____ | _____ |
| 2. _____ | ____ | _____ | _____ | _____ | _____ | _____ |
| 3. _____ | ____ | _____ | _____ | _____ | _____ | _____ |

| * Key to codes | **Key to Codes | *** Key to codes |
|---|---|---|
| S = Single | W =Non-Hispanic White | A = Adopted |
| M = Married | H =Hispanic/Latino | SC = Stepchild |
| LWP = Living with partner | AA =African American | B = Biological child |
| D = Divorced | N =Native American | F = Foster child |
| SEP = Separated | A =Asian | NR = Not related |
| | M =Multi-racial | O = Other |
| | O =Other | |

B. Last year you told us you were *{married, separated, divorced, single, living with _____}*.
Has that changed? Yes ❑ No ❑ [IF NO, SKIP TO NEXT SECTION]

[IF YES] What is the change? _____

Did partner moved out? (PROMPT: When? Why?)
❑ Yes ❑ No

Did a new partner moved in? (PROMPT: How long has partner lived here?)
❑ Yes ❑ No

New Partner's 1st Name_____ DOB_____
Ethnicity**_____

Did a non-partner move out (PROMPT: When? Why?)
❑ Yes ❑ No

Did a non-partner move in (PROMPT: When? Why? Is it a permanent or temporary arrangement?)
❑ Yes ❑ No

What is this person's relationship to you? _____

LIVING IN THE COMMUNITY

1. ***Are you living in the same place? Yes ❑ No ❑ [IF LIVING IN THE SAME PLACE, SKIP TO Q2]***

   ***[IF NO] How many different places have you lived since we last talked?_____***

   ***Tell me what has happened with the places where you lived?***

   (PROBE: Why did you move? How does this compare to where you used to live? Why do you think that?)

   Are there services close by? Yes ❑ No ❑
   How close?

   Do you have easy access to:

   | | | |
   |---|---|---|
   | Grocery store | Yes ❑ | No ❑ |
   | Medical care | Yes ❑ | No ❑ |
   | School | Yes ❑ | No ❑ |
   | Other | Yes ❑ | No ❑ |

   If not, what is missing or far away?

   Tell me about how your move affected your family.
   PROBE: How is your family responding to the change? Is the place where you are living now adequate for your needs?
   PROMPT: size, quality, price, landlord.

   What's the best thing about your new place (and/or community)? The worst thing?

   Were you without your own housing at any point in the last year? Yes ❑ No ❑
   [IF YES] What happened? How did you find housing again?
   Did you live with a relative or a friend during that time?
   Yes ❑ No ❑

   There are many community services that families need to know how to access, and what each family needs may be very different. I would like to know about the kinds of community services you know about.
   [ADMINISTER KNOWLEDGE OF COMMUNITY RESOURCES MEASURE]
   [GO TO Q3]

2. [IF THEY ARE LIVING IN THE SAME PLACE]
   Has anything changed in your neighborhood this year? Can you tell me about that?

What is the best thing about living where you do (community or neighborhood)? What's the worse?

Do you feel safe where you live? Yes ❑ No ❑
Why or why not? What makes it safe/not safe? (Physical safety or otherwise.)

Do you feel that your children are safe? (PROBE to fill in chart)

| | |
|---|---|
| In your home | Yes ❑ No ❑ |
| The neighborhood | Yes ❑ No ❑ |
| At their school | Yes ❑ No ❑ |

Why do you feel your children are safe (or unsafe)? Who (relationship) or what is it that makes you concerned for their safety? Is there anything you can do about it?

3. Why do you choose to live in this area? In this particular unit/apartment/house? In this town? In this neighborhood? (PROBE: Are family and friends in the area?
   Yes ❑ No ❑

4. Our house or apartment can sometimes have problems (such as plumbing problems or a leaky roof) that can make things difficult for us and our families.

Can you tell me about any housing problems that you have experienced? (IF NEEDED, PROBE WITH FOLLOWING)

| | |
|---|---|
| Leaky plumbing | Yes ❑ No ❑ |
| Faulty electrical system | Yes ❑ No ❑ |
| Exposed wires | Yes ❑ No ❑ |
| Broken heating system | Yes ❑ No ❑ |
| Pests (such as mice, rats, fleas, or cockroaches) | Yes ❑ No ❑ |
| Leaky roof or ceiling | Yes ❑ No ❑ |
| No hot water | Yes ❑ No ❑ |
| Stove or refrigerator that would not work | Yes ❑ No ❑ |
| Environmental problems (such as asbestos, lead paint, radon, or mold, broken stairs, doors, etc.?) | Yes ❑ No ❑ |

[IF YES TO ANY] Were you able to fix it? Yes ❑ No ❑
How did you pay for it? How long did the problem last? Did this pose a difficulty for you and your family?

EMPLOYMENT/CURRENT WORK

*{IN THIS SECTION, PICK THE SERIES OF QUESTIONS THAT CAPTURES WHAT THE RESPONDENT, AND PARTNER IF APPLICABLE, WAS/WERE DOING AT THE TIME OF THE WAVE 1 INTERVIEW. YOU MAY WANT TO ALWAYS LEAVE IN THE QUESTIONS RELATED TO A NEW PARTNER JUST TO BE SAFE.}*

*{IF RESPONDENT WAS WORKING LAST YEAR, ASK THE "A" QUESTIONS}*

1.

A. Last time we talked you said you were working at _____.
Are you still working there? Yes ❑ No ❑

[IF YES] How is your job/work going for you? Has anything changed about your job? Such as….

Different responsibilities Yes ❑ No ❑
Different hours Yes ❑ No ❑

Have you had a raise or promotion? Yes ❑ No ❑

When? How much? _____

Has the promotion changed your family life in any way (such as new hours or longer hours)

Is this your only job? Yes ❑ No ❑

[IF NO] Tell me about your other job(s).

Why did you need another job?

[IF NOT WORKING AT SAME JOB] Can you tell me about what happened with your other job? (PROBE: Why did you leave the other job?

Are you currently working? Yes ❑ No ❑

[IF NOT WORKING] Have you looked for work? Yes ❑ No ❑

[IF LOOKED FOR WORK] How has that gone? [THEN SKIP TO Q2]

[IF NOT LOOKED FOR WORK] What's kept you from looking? [THEN SKIP TO 2]

[IF YES, ARE WORKING] Tell me about the job(s) you have now. (PROBE to fill in charts: Where are you working now? What is it that you do? Are you working full-time or part-time?

| | Wage/Salary | Started | Hours/wk | Weeks/yr | Raise |
|---|---|---|---|---|---|
| Job 1 | _____ | _____ | _____ | _____ | _____ |
| Job 2 | _____ | _____ | _____ | _____ | _____ |

(PROBE to fill in chart: Do you get any benefits with this new job(s)?)

| | | |
|---|---|---|
| Health insurance for yourself | Yes ❑ | No ❑ |
| Health insurance for children | Yes ❑ | No ❑ |
| Sick leave | Yes ❑ | No ❑ |
| Vacation | Yes ❑ | No ❑ |
| Overtime | Yes ❑ | No ❑ |
| Retirement plan | Yes ❑ | No ❑ |

How does this job compare to your old job? Why do you say that?

*{IF RESPONDENT WAS NOT WORKING LAST YEAR. ASK THE "B" QUESTIONS}*

**B.** Last time we talked, you said you were not working.

Has this changed over the year? Have you looked for work? Yes ❑ No ❑

[IF YES] How has that gone?

[IF NO] What's kept you from looking? [THEN SKIP TO Q2]

[IF WORKING] Tell me about your job(s). (PROBE: How did you find this job? Did you know someone who already worked there? Where are you working now? What is it that you do? Are you working full-time or part-time?) (PROBE to fill in charts)

| | Wage/Salary | Started | Hours/wk | Weeks/yr | Raise |
|---|---|---|---|---|---|
| Job 1 | _____ | _____ | _____ | _____ | _____ |
| Job 2 | _____ | _____ | _____ | _____ | _____ |

(PROBE to fill in chart: Do you get any benefits with this new job(s)?)

| | | |
|---|---|---|
| Health insurance for yourself | Yes ❑ | No ❑ |
| Health insurance for children | Yes ❑ | No ❑ |
| Sick leave | Yes ❑ | No ❑ |
| Vacation | Yes ❑ | No ❑ |
| Overtime | Yes ❑ | No ❑ |
| Retirement plan | Yes ❑ | No ❑ |

2. In the last year, have you had the opportunity to get further education or training?
   Yes ❑ No ❑

   [IF YES] Tell me about that. What kind was it and where did you do it? (PROBE: How did you pay for it?)
   [IF EMPLOYER-SPONSORED] Who else was sent to the training?

*{IF RESPONDENT HAD A PARTNER WHO WAS WORKING AT WAVE 1, ASK THE "A" QUESTIONS}*

3. A. [IF SAME PARTNER AS WAVE 1] Last time we talked, you said _____*{name of person}* was working.

   Is he (she) still working there? Yes ❑ No ❑

   [IF YES] Has anything changed about his (her) job? (responsibilities, hours, etc.)?

   Has he (she) had a raise or promotion? Yes ❑ No ❑
   When? _____

   How much? _____

   Has the promotion changed your family life in any way (such as new hours or longer hours)?

   [IF NO] Can you share with me what happened and why he (she) is not working at the same job? (PROBE: Why did he (she) leave the other job?)

   Is he (she) currently working? Yes ❑ No ❑

   [IF NO] Has he (she) looked for work? Yes ❑ No ❑

   [IF YES, LOOKED FOR WORK] How has that gone?
   [THEN SKIP TO Q5]

   [IF NOT LOOKED FOR WORK] What has kept him (her) from looking?
   [THEN SKIP TO Q5]

[IF YES, CURRENTLY WORKING] Tell me about his (her) current job(s). (PROBE to fill in chart:
Where is he (she) working now? What is it that he (she) does? Is he (she) working full-time or part-time?

| | Wage/Salary | Started | Hours/wk | Weeks/yr | Raise |
|---|---|---|---|---|---|
| Job 1 | _____ | _____ | _____ | _____ | _____ |
| Job 2 | _____ | _____ | _____ | _____ | _____ |

(PROMPT to fill in chart: Does he (she) get any benefits with this new job?)

| | | |
|---|---|---|
| Health insurance for him/herself | Yes ❑ | No ❑ |
| Health insurance for children | Yes ❑ | No ❑ |
| Sick leave | Yes ❑ | No ❑ |
| Vacation | Yes ❑ | No ❑ |
| Overtime | Yes ❑ | No ❑ |
| Retirement plan | Yes ❑ | No ❑ |

How does this job compare to his (her) old job? Why do you say that?

*{IF RESPONDENT HAD A PARTNER WHO WAS NOT WORKING AT WAVE 1, ASK THE "B" QUESTIONS.}*

B. [IF SAME PARTNER AS WAVE 1] Last time we talked, you said _____*{INSET NAME}* was not working.

Has this changed over the year? Yes ❑ No ❑

[IF NO] Has he (she) looked for work? Yes ❑ No ❑

[IF YES, LOOKED FOR WORK] How has that gone? [THEN SKIP TO Q5]

[IF NOT LOOKED FOR WORK] What has kept him (her) from looking? [THEN SKIP TO Q5]

[IF YES, CURRENTLY WORKING] Tell me about his (her) job(s). (PROBE: How did he (she) find out about the job? Did he (she) know someone already working there? Where is he (she) working now? What is it that he (she) does? Is he (she) working full-time or part-time? (PROBE to fill in charts.)

| | Wage/Salary | Started | Hours/wk | Weeks/yr | Raise |
|---|---|---|---|---|---|
| Job 1 | | | | | |
| Job 2 | | | | | |

(PROMPT to fill in chart: Does he (she) get any benefits with this new job?)

| | | |
|---|---|---|
| Health insurance for him/herself | Yes ❑ | No ❑ |
| Health insurance for children | Yes ❑ | No ❑ |
| Sick leave | Yes ❑ | No ❑ |
| Vacation | Yes ❑ | No ❑ |
| Overtime | Yes ❑ | No ❑ |
| Retirement plan | Yes ❑ | No ❑ |

3. [IF THERE IS A NEW PARTNER] Is your partner/boyfriend/spouse employed? Yes ❑ No ❑

[IF NO] Has he (she) looked for work? Yes ❑ No ❑

[IF YES, LOOKED FOR WORK] How has that gone? [THEN SKIP TO Q5]

[IF NOT LOOKED FOR WORK] What has kept him (her) from looking? [THEN SKIP TO Q5]

[IF YES, CURRENTLY WORKING] Tell me about his (her) job(s). (PROBE: How did he (she) find out about the job? Did he (she) know someone already working there? Where is he (she) working now? What is it that he (she) does? Is he (she) working full-time or part-time? (PROBE to fill in charts.)

Has he (she) ever had a raise? Yes ❑ No ❑

When? _____ How much? _____

| | Wage/Salary | Started | Hours/wk | Weeks/yr | Raise |
|---|---|---|---|---|---|
| Job 1 | | | | | |
| Job 2 | | | | | |

(PROMPT to fill in chart: Does he (she) get any benefits with this new job?)

| | | |
|---|---|---|
| Health insurance for him/herself | Yes ❑ | No ❑ |
| Health insurance for children | Yes ❑ | No ❑ |
| Sick leave | Yes ❑ | No ❑ |
| Vacation | Yes ❑ | No ❑ |
| Overtime | Yes ❑ | No ❑ |
| Retirement plan | Yes ❑ | No ❑ |

4. Does anyone else in the household have a job? Yes ❑ No ❑

   [IF YES] Tell me about that.

   How about a child or children? Yes ❑ No ❑

   [IF YES] What is done with the child's/children's earnings?

5. [IF NOT CURRENTLY WORKING]
   Since you are not currently working outside the home, is there anything in your life that makes it more difficult for you to work at all or participate in a training program? (PROBE to fill in the chart)

| | | |
|---|---|---|
| Childcare | Yes ❑ | No ❑ |
| Health issues | Yes ❑ | No ❑ |
| Family issues | Yes ❑ | No ❑ |
| Your partner | Yes ❑ | No ❑ |

   Can you tell me more about that?

7. What is your opinion of job opportunities in this area? *{ALTERNATIVE WORDING}*
   From last year until now, what do you think of the job situation in this area? Have there been any changes?

8. Sometimes people express strong opinions about people who are receiving welfare.
   What kinds of opinions have you heard?
   What do you think of these opinions?

[IF EVER RECEIVED WELFARE] Were any of these things said to you? To your children? What was the situation? Have you ever felt that you or your children were treated differently or unfairly because you were on welfare? (PROBE to fill in chart: Have you or your family ever been….

| | | |
|---|---|---|
| Refused service | Yes ❑ | No ❑ |
| Made to wait | Yes ❑ | No ❑ |
| Treated rudely | Yes ❑ | No ❑ |

9. In the last several years, welfare regulations have changed. There is now more of an emphasis on getting a job, and there are now time limits. For example, families who have received assistance for five years in a row will not be able to get cash assistance any longer. Five years will be over for some families at the end of this year. In Michigan, single parents without children under 6 are required to work at least 30 hours per week. These changes also apply to immigrants from other countries. New legal aliens are not able to receive government help for the first five years after they arrive.

   Do you feel these rules have affected your family in any way? Yes ❑ No ❑

   Do you talk with anyone about these changes? Family? Friends? *{ALTERNATIVE WORDING}* Do you hear things on TV or radio about these changes? Yes ❑ No ❑ [IF YES] What have you heard?

TRANSPORTATION AND CHILD CARE

*{USE INFORMATION FROM WAVE 1 TO CONSTRUCT QUESTION 1.}*
*{IF HAD VEHICLE IN WAVE 1, ASK 1A.}*

1. A. Last time we talked, you said that you had a (reliable car/ unreliable car*{INDICATE WHICH}*). Have you had a situation in the last year when you had a problem with your car/truck*{OR WHATEVER TRANSPORTATION SHE HAS}*? Yes ❑ No ❑

   Tell me about what happened. What did you do?

   Has a friend or relative helped you out? Yes ❑ No ❑

   How do you get around if your car breaks down or is not available to you?

*{IF NO VEHICLE IN WAVE 1, ASK 1B.}*

1. B. Last time we talked, you said that you usually get around by _____ *{USE INFORMATION FROM WAVE I}* Do you still depend on *{THIS PERSON/ THIS TYPE OF TRANSPORTATION}*? Yes ❑ No ❑

(PROBE: How do you usually get around? How do you get to work? How do you get groceries?) (PROBE IF NECESSARY:

Has a friend or relative helped you out? Yes ❑ No ❑

2. This year the price of gas has gone up and down. Did this change anything in how you get around? Yes ❑ No ❑
(PROBE: Have the increases caused you any problems? Yes ❑ No ❑
What have you done?)

*{USE INFORMATION FROM WAVE 1 TO CONSTRUCT QUESTION 3.}*

3. [IF APPROPRIATE] Last time we talked, you said that

_____

provided care for your children. Do you still have the same arrangement(s)?
Yes ❑ No ❑ [IF YES, GO TO Q4]

[IF NO] What brought about the changes? Do you have a new child care provider?
(PROBE: How is this working out? How do you like your new child care provider(s)?
How does your child like the provider(s)? (IF MORE THAN ONE PROVIDER,
PROBE: How many? Why more than one?)

*{IF RESPONDENT HAS OLDER CHILDREN, ASK QUESTION 4, OTHERWISE OMIT.}*

4. [IF APPROPRIATE] What about your older children? What do they do after school?
What about school holidays and summers?

5. Tell me about a situation when you needed emergency childcare. What did you do?
(PROBE: Have you ever had to miss work or a training program because of a childcare problem? Yes ❑ No ❑ [IF YES] How did your supervisor react? (PROBE IF NECESSARY: Has a friend or relative helped you out? PROBE: Is there a time when you needed someone to take care of your children outside your time at work? Who does that? How does it go?

6. What do you do for childcare if your child gets sick? What happens if your childcare provider is sick? (PROBE IF NECESSARY: Has a friend or relative helped you out?)
(PROBE IF APPROPRIATE: How did your supervisor react?

7. [IF RESPONDENT IS CURRENTLY WORKING] How is it combining work responsibilities and family responsibilities? Do you have any problems at home because of work? Or do you have any problems at work because of family?

8. [ONLY FOR MI RESPONDENTS] We have been talking about childcare, transportation, and a lot of other issues. Can you think for a moment about a list of all of the things that need to happen in order for you [and/or your partner] to be able to work for pay. What would you need most to be able to work for pay? What would come next? [Continue with the list as far as they can.] Is there anything that you have not already told us about that you need to have or you need to happen in order to be able to work? (PROBE: Moving for work, commuting, carpooling, child care, housekeeping, new clothing or uniforms, odd jobs to make enough money, education for a better job, help from friends or family, …)

9. [ONLY FOR MI RESPONDENTS] Last time, you told us about what your ideal job would be, the sort of job you would most like to have. What would be an ideal job for you right now? What would you need to happen for you to get that job and be able to keep it? (PROBE: moving, commuting, carpooling, child care, housekeeping, odd jobs, education, training, help from friends or family, …)

10. [IF RESPONDENT IS CURRENTLY WORKING] Is there anything in your life that makes it more difficult for you to hold down a job (or participate in a training program)? (PROBE to fill in chart)

| | | |
|---|---|---|
| Childcare | Yes ❑ | No ❑ |
| Health issues | Yes ❑ | No ❑ |
| Family issues | Yes ❑ | No ❑ |
| Your partner | Yes ❑ | No ❑ |

Can you tell me more about that?

FAMILY OF ORIGIN

1. Last year we talked a bit about your family background. In the past year, have there been any important changes in your relationships with your parents or your brothers and sisters or other relatives?

2. Has your family experienced any important events in the last year, or is there any family news that you think we should know about? (PROBE: births, deaths, marriages, illnesses, etc.)

INCOME AND MAKING ENDS MEET

1. We would like to know about your family's sources of income in the past year. Remember, all this information is completely confidential. From which of the following did you receive income this year? (PROBE for changes in TANF, child and spousal support, food stamps, wages: Has that been the same all year? Tell me about the change.)

| | ***Amount*** | ***Weekly*** | ***Biweekly*** | ***Monthly*** | ***Other*** |
|---|---|---|---|---|---|
| Wages & Salaries (self) | _____ | ❑ | ❑ | ❑ | ❑ |
| Wages & Salaries (partner) | _____ | ❑ | ❑ | ❑ | ❑ |
| Tips, Commissions, Overtime | _____ | ❑ | ❑ | ❑ | ❑ |
| Social Security Disability | _____ | ❑ | ❑ | ❑ | ❑ |
| Social Security Retirement/ pensions | _____ | ❑ | ❑ | ❑ | ❑ |
| Supplementary Security Income | _____ | ❑ | ❑ | ❑ | ❑ |
| TANF | _____ | ❑ | ❑ | ❑ | ❑ |
| Unemployment Compensation | _____ | ❑ | ❑ | ❑ | ❑ |
| Worker's Disability Compensation | _____ | ❑ | ❑ | ❑ | ❑ |
| Veterans' Benefits | _____ | ❑ | ❑ | ❑ | ❑ |
| Child or Spousal Support | _____ | ❑ | ❑ | ❑ | ❑ |

When it doesn't come, what do you do? How do you manage?

| | | | | | |
|---|---|---|---|---|---|
| Children's wages | _____ | ❑ | ❑ | ❑ | ❑ |
| Food Stamps | _____ | ❑ | ❑ | ❑ | ❑ |
| Regular gifts from family/ friends | _____ | ❑ | ❑ | ❑ | ❑ |
| Others | _____ | ❑ | ❑ | ❑ | ❑ |

2. Did you receive assistance from any of the following sources over the past year? [TRY TO RECORD THE CASH VALUE IF POSSIBLE.]

| | Amount | |
|---|---|---|
| WIC | _____ | What do you get from WIC? |
| School Lunch/Breakfast Program | _____ | Do your children eat the food? Yes ☐ No ☐ |
| Earned Income Tax Credit | _____ | What did you do with the money? |
| Childcare Assistance | _____ | |
| Housing Assistance | _____ | |
| Energy/fuel Assistance | _____ | |
| Transportation Assistance | _____ | |
| Education Grants or Loans | _____ | |
| Medicaid | _____ | |
| Diversionary Assistance *{IF APPLICABLE}* | _____ | |
| Other [describe]_____ | _____ | |

3. Housing is usually the largest expense for families. Tell me about how much you pay per month and what utilities, if any, are included. About how much do you pay each month for the utilities that are not included in your rent? (PROBE to fill in chart)

| | Included in Rent | Pays | Amount |
|---|---|---|---|
| Electricity | ❑ | ❑ | how much per month?_____ |
| Gas/Oil/Wood/Coal | ❑ | ❑ | how much per month?_____ |
| Cable TV | ❑ | ❑ | how much per month?_____ |
| Water | ❑ | ❑ | how much per month?_____ |
| Garbage | ❑ | ❑ | how much per month?_____ |

This year energy prices have gone up. Has anything happened to you over the past few months that has changed your housing costs? (PROBE: Rent gone up? Utilities shut off?) What did you do?

(PROBE IF PAYS UTILITIES) In the last year, did you ever have a difficult time paying for the utilities? Yes ❑ No ❑
[IF YES] What did you do? Was anything disconnected? Yes ❑ No ❑
[IF YES] What did you do to get it turned on again?
Who helped?

4. Tell me about telephone service you have. About how much do you pay each month?

_____
What services does this include? (PROBE: Internet connection, long distance, cell phone, pager?) Have you had a problem paying for phone service in the last year? Yes ❑ No ❑

5. In the past year, have you had a problem paying for any of the following?

   [FOR EACH YES] What have you done when this happened?

| | | |
|---|---|---|
| Food | Yes ❑ | No ❑ |
| Clothing | Yes ❑ | No ❑ |
| Medical care | Yes ❑ | No ❑ |
| Dental care | Yes ❑ | No ❑ |
| Medicines | Yes ❑ | No ❑ |
| Credit payments | Yes ❑ | No ❑ |
| Personal care items | Yes ❑ | No ❑ |
| Diapers | Yes ❑ | No ❑ |
| School fees or expenses | Yes ❑ | No ❑ |
| Rent or house payment | Yes ❑ | No ❑ |
| Anything else | Yes ❑ | No ❑ |

6. [OPTIONAL] What other monthly bills do you have? (PROMPT: rent-to-own?) How much do you normally spend on these? Have you ever had trouble paying any of them? Yes ❑ No ❑ [IF YES] What did you do?

7. Since we last talked, have you, or any members of your household, been close to going hungry or ever gone hungry?
   Yes ❑ No ❑ [IF YES] Tell me how this happened? What led to your being hungry?

8. Tell me about any strategies you have to help make the food last until the end of the month. (PROMPT: Do you or your children ever eat at a family member's or friend's house? Yes ❑ No ❑ [IF YES] Tell me about this.) (PROBE: How often does that happen? Do you ever cook together with some other family to make enough for both families? Yes ❑ No ❑
   (PROMPT: Have you gotten food from a food bank or soup kitchen during the last year? Yes ❑ No ❑ [IF YES] Tell me about this. How useful was the kinds of food you got?)

9. [ADMINISTER FOOD SECURITY MODULE]

10. When people are having a hard time making ends meet, sometimes they will work for cash by doing different kinds of odd jobs. Have you ever done anything like that?
    Yes ❑ No ❑
    (PROBE: Cleaned homes? Collected bottles/cans? Mowed lawns? Shoveled snow?)
    [IF APPROPRIATE] Has your partner ever worked for cash?
    Yes ❑ No ❑

[IF YES] What did you do? How long? Have you done this in the last year?
Yes ❑ No ❑

How much did you earn? _____ Did you like doing that work?

[IF NO] Do you know other people who do this? What do you think about it?

11. Compared with last year, would you say that your family's economic situation has...
[CIRCLE NUMBER OF RESPONSE]
5 Improved a lot
4 Improved a little
3 Remained the same
2 Gone down a little
1 Gone down a lot

12. To what extent to do you think your income is enough for you to live on?
[CIRCLE NUMBER OF RESPONSE]
1 Not at all adequate
2 Can meet necessities only
3 Can afford some of the things we want but not all we want
4 Can afford about everything we want
5 Can afford about everything we want and still save money

13. During the last year, did you ever borrow money from a relative or friend?
Yes ❑ No ❑
[IF YES] Why did you borrow it? How much did you borrow? _____
Have you been able to pay it back? Yes ❑ No ❑

[IF YES, PAID BACK] How were you able to do that?

[IF NOT PAID BACK] Has anything happened because you have not been able to pay it back? Yes ❑ No ❑

14. If you got $20 tomorrow, what would you do with it?

15. If you got $200 tomorrow, what would you do with it?

16. What if your child needed a new pair of shoes, how would you get them for him or her?

17. Birthdays are often times for celebration. Tell me about how you celebrate your child's /

children's birthday(s). (PROBE: How much would you usually spend on a gift?)

18. When you think about your bills and the things you need to buy, how do you decide which comes first if you don't have the money for them all?

19. What are your favorite money-stretching techniques?

20. How has the health of your family been this year? Has the health of any family member changed? How? (PROBE: Has a health problem affected your family life at all? How?)

21. ADMINISTER CHILD HEALTH SURVEY & ADULT HEALTH SURVEY.]

PARENTING

1. [IF LIVING WITH PARTNER/SPOUSE] What sort of parenting tasks do you typically do? And what parenting tasks does your partner/boyfriend/spouse typically do?

2. Do you (and your partner/boyfriend/spouse IF APPLICABLE) get help or advice in parenting from anyone else? What sort of help do they provide? How do you feel about this help?

3. [IF RESPONDENT IS NOT LIVING WITH FATHER OF CHILD/REN] During the past 12 months, how often did your child(ren) see their father(s)? Why? [MAKE SURE THAT QUESTION IS ANSWERED FOR EACH NON-CUSTODIAL FATHER.]

***Overall, what is your relationship like with _____'s {*INSERT NAME OF CHILD/CHILDREN*} father?***

***Why do you say that?***

Do you think that _____'s {*INSERT NAME OF CHILD/CHILDREN}* father wants a close relationship with his child?
What makes you say that? [ASK FOR EACH FATHER IF MORE THAN ONE.]

Do you ever have conflicts with _____'s {*INSERT NAME OF CHILD/CHILDREN}* father about the child? Yes □ No □

[IF YES] What are the conflicts about? (PROBE to fill in chart)

| | | |
|---|---|---|
| Custody | Yes ❑ | No ❑ |
| Child support | Yes ❑ | No ❑ |
| How child is being raised | Yes ❑ | No ❑ |
| Visits | Yes ❑ | No ❑ |
| Other | Yes ❑ | No ❑ |

How do these conflicts get resolved?

4. [OPTIONAL] What is your number one wish for your child/ren? Why do you feel this way? Has this changed over the last few months? Yes ❑ No ❑
   [IF YES] Why?

5. [ADMINISTER PARENTING LADDER.]

6. About how you responded to the last question on the Parenting Ladder, why do you feel that way?

FAMILY WELL-BEING

*{USE THE INFORMATION FROM WAVE 1 TO CONSTRUCT THE NEXT QUESTION.}*

1. Last year, you said that the thing that you were looking forward to the most was_____.
   How is that going? *{OR WHATEVER THE APPROPRIATE FOLLOW-UP QUESTION(S) MAY BE.}*

*{IF THERE IS SOMETHING ELSE FROM WAVE 1 THAT YOU WISH TO FOLLOW UP ON WITH THE RESPONDENT, USE THE NEXT QUESTION AS A GUIDE. OTHERWISE OMIT.}*

2. Last year you mentioned _____ (or you were _____). Is the situation still the same? Have things changed? Gotten better? Gotten worse? *{OR WHATEVER THE APPROPRIATE FOLLOW-UP QUESTION(S) MAY BE.}*

3. A. [OPTIONAL] Would you describe yourself as a person with religious or spiritual beliefs? Yes ❑ No ❑

   ***[IF YES] Does this play a role in your everyday life? Yes ❑ No ❑***

   ***How so?***

   B. *{ALTERNATIVE WORDING}* What do you rely on when times are difficult? Religion? Family? Friends? How does this/do they help you?

4. Tell me about a typical day. (PROBE: What time do you get up? When do your children get up? What happens next? And then? [THE GOAL HERE IS TO GET A PICTURE OF A TYPICAL WEEKDAY FOR THE FAMILY.]

5. What sorts of things do you do for fun? [PROBE: Do you have any hobbies?]

6. What things about your family make you proud and happy right now?

7. What are the biggest challenges for your family as a whole?

8. How are things going for your family right now? Tell me about that. How are things going for you personally?

9. [IF HAS PARTNER] How are things between you and your partner? Tell me about that.

10. Is there any one who is making things harder for your family right now? Tell me about that.

11. Overall, how satisfied are you with your life right now?
    [CIRCLE NUMBER OF RESPONSE]
    1 Very dissatisfied
    2 Dissatisfied
    3 Mixed feelings
    4 Satisfied
    5 Very satisfied

    Why do you feel that way?

12. [ADMINISTER FEELINGS ABOUT HOW THINGS ARE GOING MEASURE.]

SOCIAL SUPPORT

1. Have you made any new friends over the past year? What has made that possible?

2. Are you able to get together with friends? What kinds of things do you do? How often?

3. Are there any old friends that you have lost contact with over the last year? Tell me a little about that.

SUMMARY

1. What is the most important thing that happened to your family in the past year? Did something good happen to you or one of your children? Did something not so good happen to you or one of your children?

2. Thinking ahead to the coming year, what are you looking forward to? What worries you? What do you think things will be like for your family next year at this time?

3. What do you think things will be like for your family in three years? Why do you think this?

4. Is there anything else you think we should know about how your family is doing right now? Is there anything we have missed?

*[PLEASE MAKE SURE THAT THE CONTACT PERSON IS STILL THE SAME, AND THAT PERSON'S INFORMATION IS STILL THE SAME.*

5. *The last time we talked, you said that _____ would know how to find you if we were unable to contact you. Has this changed?*

*Contact Information from Wave I:*

*PLEASE MAKE ANY CHANGES OR WRITE NEW CONTACT INFORMATION BELOW BEFORE ENDING THE INTERVIEW:*

*This is the end of the interview. Thank you so much.*

There are many community services that families need to know how to access. The services needed are different for each family. If you needed it, would you know where to go to:

Table B.1. Knowledge Of Community Resources

| Service | Yes | No |
|---|---|---|
| 3. Get help on heating bills | | |
| 4. Apply for subsidized housing | | |
| 3. Find temporary housing | | |
| 4. Apply for Medicaid | | |
| 5. Find help for a drug or alcohol problem | | |
| 6. Find help for a domestic violence problem | | |
| 7. Get your child immunized | | |
| 8. Find a family doctor | | |
| 9. Find dental care | | |
| 10 Find a mental health counselor | | |
| 11. Find family planning services | | |
| 12. Apply for welfare | | |
| 13. Get legal assistance | | |
| 14. Apply for food stamps | | |
| 15. Apply for WIC | | |
| 16. Locate job training | | |
| 17. Find transportation choices | | |
| 18. Find child care | | |
| 19. Apply for a child care subsidy | | |
| 20. Find help for a family member with disabilities | | |
| 21. Find low-cost clothing for your family | | |
| 23 Find Cooperative Extension Activities (EFNEP, | | |

Table B. 2. Life Skills Assessment

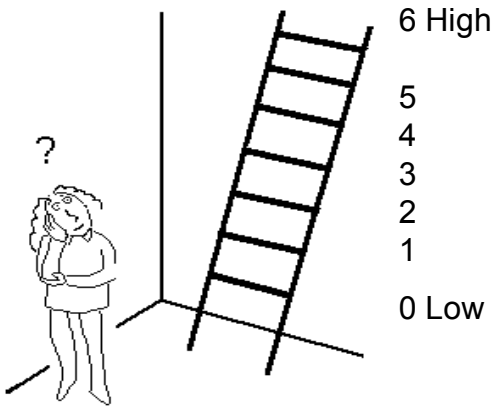
| Do you have: | Yes | No |
|---|---|---|
| 1. A driver's license | | |
| 2. Car insurance | | |
| 3. Car registration | | |
| 4. Heath insurance | | |
| 5. A checking account | | |
| 6. A good credit record | | |
| 7. A local library card | | |
| Do you know how to: | | |
| 8 Manage your bills | | |
| 9 Write a personal check | | |
| 10 Make a family budget | | |
| 11. Stretch your groceries to the end of the month | | |
| 12. Register to vote | | |
| 13. Apply for a credit card | | |
| 14. Prepare a well-balanced meal for your family | | |
| 15. Get telephone service | | |
| 16. Work with your landlord to improve housing | | |
| 17. Register a consumer complaint | | |
| 18. Talk to your child's teacher | | |
| 19. Fill out forms to apply for services | | |
| 20. Apply for a job | | |
| 21. Write a resume | | |
| 22. Dress for a job | | |
| 23. Fill out your own income tax forms | | |
| 24. Join a local club or organization | | |
| 25. Create a personal support system | | |

For each of the following statements, check the box that best describes HOW OFTEN YOU HAVE FELT THIS WAY DURING THE PAST WEEK.

Table B. 3. Feelings About How Things Are Going

| | Rarely or none of the time | A little of the time | A moderate amount of time | Most or all of the time |
|---|---|---|---|---|
| 1. I was bothered by things that don't usually bother me | ❑ | ❑ | ❑ | ❑ |
| 2. I did not feel like eating; my appetite was poor | ❑ | ❑ | ❑ | ❑ |
| 3. I felt that I could not shake the blues even with help from my family and friends | ❑ | ❑ | ❑ | ❑ |
| 4. I felt that I was just as good as other people | ❑ | ❑ | ❑ | ❑ |
| 5. I had trouble keeping my mind on what I was doing | ❑ | ❑ | ❑ | ❑ |
| 6. I felt depressed | ❑ | ❑ | ❑ | ❑ |
| 7. I felt that everything I did was an effort | ❑ | ❑ | ❑ | ❑ |
| 8. I felt hopeful about the future | ❑ | ❑ | ❑ | ❑ |
| 9. I thought my life had been a failure | ❑ | ❑ | ❑ | ❑ |
| 10. I felt fearful | ❑ | ❑ | ❑ | ❑ |
| 11. My sleep was restless | ❑ | ❑ | ❑ | ❑ |
| 12. I was happy | ❑ | ❑ | ❑ | ❑ |
| 13. I talked less than usual | ❑ | ❑ | ❑ | ❑ |
| 14. I felt lonely | ❑ | ❑ | ❑ | ❑ |
| 15. People were unfriendly | ❑ | ❑ | ❑ | ❑ |
| 16. I enjoyed life | ❑ | ❑ | ❑ | ❑ |
| 17. I had crying spells | ❑ | ❑ | ❑ | ❑ |
| 18. I felt sad | ❑ | ❑ | ❑ | ❑ |
| 19. I felt that people disliked me | ❑ | ❑ | ❑ | ❑ |
| 20. I could not "get going" | ❑ | ❑ | ❑ | ❑ |

Figure B. 1. The Parenting Ladder




*Where would you put yourself on the Parenting Ladder in terms of:*

Your knowledge of how children grow and develop? _____

Your confidence that you know what is right for your child?_____

Your ability to create a safe home for your child? _____

Your success in teaching your child how to behave? _____

Your skill at finding fun activities that interest your child? _____

The amount of stress in your life right now? _____

Your ability to cope with the stress in your life? _____

Parenting is often smoother when others are there to help. Where would you put yourself on the Parenting Ladder in terms of:

Other parents for you to talk to? _____

Someone to help you in an emergency? _____

Someone to offer helpful advice or moral support?

Someone for you to relax with? _____

Professional people to talk to when you have a question about your child? _____

Your overall satisfaction with the amount of support in your life? _____

ADULT HEALTH SURVEY

Do you and/or your partner have medical insurance?
You Yes_____ No_____
Partner Yes_____ No_____

If yes, what kind?
- Private/HMO
- Medicaid/MA
- State Health Plan
- Other (Explain)

_____

Do you and/or your partner have any type of dental insurance?
You Yes_____ No_____
Partner Yes_____ No_____

If yes, what kind?
- Private
- Medicaid/MA
- Other (explain)

About how many times in the past year have you been to a doctor or other health care provider?
_____
_____

Your partner?_____
____

If none, when was the last time you visited a doctor or health care provider?
_____

Your partner?_____

About how many times in the past year have you visited a dentist?_____

Your partner?_____

If none, when was the last time you did visit a dentist?

---

Your partner?_____

Have you or your partner had any injuries or serious illnesses in the past year?
You Yes _____
No _____
Partner Yes _____
No _____

If yes, please explain
_____
_____
_____

About how many times in the past year have you missed work due to an illness/injury?
_____

Your partner?_____

Have you been pregnant in the past three years
Yes_____ No_____
If yes: How many times_____

Are you and your partner able to have more children?
Yes_____ No_____

If so, do you currently use birth control?
Yes_____ No_____

In the past three years, have you or your partner experienced any of the following health problems?

| | You | Partner | | You | Partner |
|---|---|---|---|---|---|
| Heart Problems | ❑ | ❑ | Joint Problems | ❑ | ❑ |
| High Blood Pressure | ❑ | ❑ | Chronic Pain | ❑ | ❑ |
| Diabetes | ❑ | ❑ | Eating Disorder/ Obesity | ❑ | ❑ |
| Cancer | ❑ | ❑ | Skin Problems | ❑ | ❑ |
| Digestive Problems | ❑ | ❑ | Permanent Disability | ❑ | ❑ |
| Liver Problems | ❑ | ❑ | Sexually Transmitted | | |
| Seizure Disorder | ❑ | ❑ | Disease | ❑ | ❑ |
| Depression/Anxiety | ❑ | ❑ | Reproductive Problems | ❑ | ❑ |
| Anger Management | ❑ | ❑ | Bladder Infections | ❑ | ❑ |
| Hepatitis | ❑ | ❑ | Drug Problem | ❑ | ❑ |
| Allergies | ❑ | ❑ | Alcohol Problem | ❑ | ❑ |
| Asthma | ❑ | ❑ | Tobacco Use | ❑ | ❑ |
| Frequent colds/ flu/sinus | ❑ | ❑ | Anemia | ❑ | ❑ |
| Thyroid Problems | ❑ | ❑ | Emotional, physical, | | |
| Kidney Problems | ❑ | ❑ | or sexual abuse | ❑ | ❑ |
| Fatigue | ❑ | ❑ | Migraines/Headaches | ❑ | ❑ |
| Eye or vision problems | ❑ | ❑ | Learning Disabilities | ❑ | ❑ |
| Back Problems | ❑ | ❑ | Arthritis | ❑ | ❑ |

Other (specify)_____

First name of: Child 1:_____ Child 2: _____
Child 3: _____

CHILD HEALTH SURVEY

Does C1 have medical insurance?
- Private/HMO
- Medicaid/MA
- State Plan
- Other (Explain):

_____
_____

C2: Y Yes Y No If yes, what kind?
- Private/HMO
- Medicaid/MA
- State Plan
- Other (Explain):

_____
_____

C3: Y Yes Y No If yes, what kind?
- Private/HMO
- Medicaid/MA
- State Plan
- Other (Explain):

_____
_____

About how many times in the past year has your child been to a doctor or other health care provider?
C1 _____ C2 _____
C3 _____

If none, when was the last time your child visited a doctor or health care provider?
C1 _____ C2 _____
C3 _____

Does C1 have any type of dental insurance? Y Yes Y No If yes, what kind?
- Private
- Medicaid/MA
- Other (Explain):

_____

C2: Y Yes Y No If yes, what kind?
- Private
- Medicaid/MA
- Other (Explain):

_____

C3: Y Yes Y No If yes, what kind?
- Private
- Medicaid/MA
- Other (Explain):

_____

About how many times in the past year has your child visited a dentist?

C1 _____ C2 _____ C3 _____

If none, when was the last time your child did visit a dentist?

C1 _____ C2 _____
C3 _____

Has your child had any injuries or serious illnesses in the past year?
C1: Y Yes YNo
C2: Y Yes YNo
C3: Y Yes YNo

If yes, please explain_____
_____
_____
_____
_____
_____
_____

About how many times in the past year has your child missed school due to an illness/injury?
C1: _____

C2: _____

C3: _____

In the past three years, has your child experienced any of the following health problems?

| | C1 | C2 | C3 |
|---|---|---|---|
| Allergies | ❑ | ❑ | ❑ |
| Anemia | ❑ | ❑ | ❑ |
| Asthma | ❑ | ❑ | ❑ |
| Cancer | ❑ | ❑ | ❑ |
| Chronic Pain | ❑ | ❑ | ❑ |
| Learning Disability | ❑ | ❑ | ❑ |
| Depression/Anxiety | ❑ | ❑ | ❑ |
| Anger Management | ❑ | ❑ | ❑ |
| Diabetes | ❑ | ❑ | ❑ |
| Digestive Problems | ❑ | ❑ | ❑ |
| Drug Problem | ❑ | ❑ | ❑ |
| Alcohol Problem | ❑ | ❑ | ❑ |
| Ear Infections | ❑ | ❑ | ❑ |
| Eating Disorder/ Obesity | ❑ | ❑ | ❑ |
| Eye or vision | ❑ | ❑ | ❑ |
| Fatigue | ❑ | ❑ | ❑ |
| Frequent colds/flu/ sinus | ❑ | ❑ | ❑ |
| Hepatitis | ❑ | ❑ | ❑ |
| Seizure Disorders | ❑ | ❑ | ❑ |
| Skin Problems | ❑ | ❑ | ❑ |

| | C1 | C2 | C3 |
|---|---|---|---|
| Head Lice | ❑ | ❑ | ❑ |
| Behavior Problems | ❑ | ❑ | ❑ |
| Conjunctivitis (pink eye) | ❑ | ❑ | ❑ |
| ADD/ADHD | ❑ | ❑ | ❑ |
| Fetal Alcohol Effects/ Syndrome | ❑ | ❑ | ❑ |
| Fetal Drug Effects | ❑ | ❑ | ❑ |
| Broken Bones | ❑ | ❑ | ❑ |
| Sexually Transmitted Disease | ❑ | ❑ | ❑ |
| Skeletal Problems | ❑ | ❑ | ❑ |
| Tobacco Use | ❑ | ❑ | ❑ |
| Migraines/Headaches | ❑ | ❑ | ❑ |
| Permanent Disability | ❑ | ❑ | ❑ |
| Other (specify) | | | |

FOOD SECURITY MODULE

These next questions ask about the food eaten in your household in the last 12 months, since (current month) of last year, and whether you were able to afford the food you need.

1. Which of these statements bests describes the food eaten in your household in the last 12 months:

[1] Enough of the kinds of food we want to eat (SKIP 1a and 1b)
[2] Enough but not always the kinds of foods we want (SKIP 1a)
[3] Sometimes not enough to eat (SKIP 1b)
[4] Often not enough to eat (SKIP 1b)
[ ] DK or Refused (SKIP 1a and 1b)

1a. [IF OPTION 3 OR 4 SELECTED, ASK] Here are some of the reasons why people don't always have enough to eat. For each one, please tell me if that is a reason why YOU don't always have enough to eat. [READ LIST. MARK ALL THAT APPLY.]

| YES | NO | DK | |
|---|---|---|---|
| ❑ | ❑ | ❑ | Not enough money for food |
| ❑ | ❑ | ❑ | Not enough time for shopping or cooking |
| ❑ | ❑ | ❑ | Too hard to get to the store |
| ❑ | ❑ | ❑ | On a diet |
| ❑ | ❑ | ❑ | No working stove available |
| ❑ | ❑ | ❑ | Not able to cook because of health problems |

1b. [IF OPTION 2 SELECTED, ASK] Here are some reasons why people don't always have the quality or variety of food they want. For each one, please tell me if that is a reason why YOU don't always have the kinds of food you want to eat. [READ LIST. MARK ALL THAT APPLY.]

| YES | NO | DK | |
|---|---|---|---|
| ❑ | ❑ | ❑ | Not enough money for food |
| ❑ | ❑ | ❑ | Kinds of food we want not available |
| ❑ | ❑ | ❑ | Not enough time for shopping or cooking |
| ❑ | ❑ | ❑ | Too hard to get to the store |
| ❑ | ❑ | ❑ | On a special diet |

2. Now I'm going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true, sometimes true, or never true for your household in the last 12 months, that is, since last (name of current month).

   The first statement is "We worried whether our food would run out before we got money to buy more." Was that often true, sometimes true, or never true for your household in the last 12 months?
   - ❑ Often True
   - ❑ Sometimes True
   - ❑ Never True
   - ❑ DK or Refused

3. "The food that we bought just didn't last, and we didn't have money to get more." Was that often, sometimes or never true for your household in the last 12 months?
   - ❑ Often True
   - ❑ Sometimes True
   - ❑ Never True
   - ❑ DK or Refused

4. "We couldn't afford to eat balanced meals." Was that often, sometimes or never true for your household in the last 12 months?
   - ❑ Often True
   - ❑ Sometimes True
   - ❑ Never True
   - ❑ DK or Refused

5. "(I/We) relied on only a few kinds of low-cost food to feed (my/our) child/ren because (I was/we were) running out of money to buy food." Was that often, sometimes or never true for your household in the last 12 months?
   - ❑ Often True
   - ❑ Sometimes True
   - ❑ Never True
   - ❑ DK or Refused

6. "(I/We) couldn't feed (my/our) child/ren a balanced meal, because I couldn't afford that." Was that often, sometimes or never true for your household in the last 12 months?
   - ❑ Often True
   - ❑ Sometimes True
   - ❑ Never True
   - ❑ DK or Refused

If answer "often true" or "sometimes true" to any one of Questions 2-6, or response [3] or [4] to Question 1, then ask questions 7-16, otherwise stop here.

7. "(My/Our child was/The children were) not eating enough because (I/we) just couldn't afford enough food." Was that often, sometimes or never true for your household in the last 12 months?
    - ❑ Often True
    - ❑ Sometimes True
    - ❑ Never True
    - ❑ DK or Refused

8. In the last 12 months, since last (name of current month), did you (or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?
    - ❑ Yes
    - ❑ No (Skip 8a)
    - ❑ DK (Skip 8a)

8a. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

- ❑ Almost every month
- ❑ Some months, but not every month
- ❑ Only one or 2 months
- ❑ DK

9. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food?
    - ❑ Yes
    - ❑ No
    - ❑ DK

10. In the last 12 months, were you ever hungry but didn't eat because you couldn't afford enough food?
    - ❑ Yes
    - ❑ No
    - ❑ DK

11. In the last 12 months, did you lose weight because you didn't have enough money for food?
    - ❑ Yes
    - ❑ No
    - ❑ DK

If any answer to Question 7-11 is affirmative, continue, otherwise stop here.

12. In the last 12 months did (you/you or other adults in your household) ever not eat for a whole day because there wasn't enough money for food?
    - ❑ Yes
    - ❑ No (Skip 12a)

❑ DK (Skip 12a)

12a. [IF YES TO 12, ASK] How often did this happen—almost every month, some months, but not every month, or in only 1 or 2 months?

❑ Almost every month
❑ Some months, but not every month
❑ Only one or 2 months
❑ DK

13. The next questions are about children living in the household who are under 18 years old. In the last 12 months, since (current month) of last year, did you ever cut the size of (your child's/any of the children's) meals because there wasn't enough money for food?

❑ Yes
❑ No
❑ DK

14. In the last 12 months, did (CHILD'S NAME/any of the children) ever skip meals because there wasn't enough money for food?

❑ Yes
❑ No (skip 14a)
❑ DK (skip 14a)

14a. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

❑ Almost every month
❑ Some months, but not every month
❑ Only one or 2 months
❑ DK

15. In the last 12 months, (was your child/were the children) ever hungry but you just couldn't afford more food?

❑ Yes
❑ No
❑ DK

16. In the last 12 months, did (your child/any of the children) ever not eat for a whole day because there wasn't enough money for food?

❑ Yes
❑ No
❑ DK

# APPENDIX C

## Wave Three Protocol

Interviewer_____ ID:_____ Date: _____ W1 Date_____ W2 Date_____

I want to thank you for agreeing to be interviewed again this year. Just like before, we are interested in hearing what life is like for you and your family. I want to remind you that the interview is voluntary. If you do not want to answer a question, you don't have to. All information that you give us will be kept confidential.

Before we begin, I want to make clear that the time period we want to gather information about is between the date of our last interview, _____ *{give date of wave 2 interview},* and today. I will keep reminding us both of this as I ask you the questions.
[DO NOT PROCEED UNLESS PARTICIPANT HAS SIGNED THE INFORMED CONSENT FORM.]

Notes from previous interview

Partner/Spouse:

_____

Child(ren):
_____
_____
_____
_____
_____
_____
_____
_____

CURRENT HOUSEHOLD COMPOSITION

Mother's 1st Name_____

We'd like to catch up on any changes in your life and in your family since our last interview on _____.

1. Last time, you said that *[GIVE NAMES]* _____ were living in your household.

Have there been any changes since our last interview?
□ No → [GO TO QUESTION #2]

□ Yes →

1A) What has changed?
**[FILL OUT CHART BELOW FOR NEW CHILD/PARTNER]**

1B) **[IF CHILD MOVED OUT]** When? Why? Where is child living now?

1C) [**IF PARTNER MOVED OUT]** When? Why?

1D) [**IF NEW PARTNER MOVED IN]** How long has your new partner lived here?

1E) Any other changes? Are there any other new members of your household?

*(FILL IN CHART FOR NEW CHILDREN/PARTNER)*

| New Child (first name) | Sex | DOB | Relation Mother | Relation Partner/ Spouse | Contact w/ bio parent (Y, N) | Receives child support (Y, N) |
|---|---|---|---|---|---|---|
| **1.** | | | | | | |
| **2.** | | | | | | |
| **3.** | | | | | | |

| New Partner | DOB | Ethnicity |
|---|---|---|
| **4.** | | |

**[IF APPLICABLE]** Does your partner have any children not currently living with you?
_____

| * Key to codes | **Key to Codes | *** Key to codes |
|---|---|---|
| **S = Single** | **W = Non-Hispanic White** | **A = Adopted** |
| **M = Married** | **H = Hispanic/Latino** | **SC = Stepchild** |
| **LWP = Living /partner** | **AA = African American** | **B = Biologicalchild** |
| **D = Divorced** | **N = Native American** | **F = Foster child** |
| **SEP = Separated** | **A = Asian** | **NR = Not related** |
| | **M = Multi-racial** | **O = Other** |
| | **O = Other** | |

2. Last year you told us you were _____. *{married, separated, divorced, single, living with _____}.*

Has that changed?

☐ Yes →

☐ No

2A) What has changed? _____ *(see chart on previous page for appropriate code)*

FAMILY WELL-BEING

1. What is the most important thing that happened to your family since our last interview?
Did something good happen to your family? Did something not so good happen to your family?

2. How are things going for your family right now? Tell me about that.

3. [IF HAS PARTNER] How are things between you and your partner? Tell me about that.

4. Relationships with family members can change over time; get better, get worse, or just be different.
Since our last interview, what changes have there been in your relationships with your
parents, brothers and sisters, or other relatives?

Family Well-Being notes from previous interviews:

SOCIAL SUPPORT

1. How often during the last month did friends give you practical help?
- □ Often
- □ Sometimes
- □ Rarely
- □ Never

2. [IF APPROPRIATE] What types of things have friends done for you and your family?

3. How often during the last month did relatives (excluding partner) give you practical help?
- □ Often
- □ Sometimes
- □ Rarely
- □ Never

4. [IF APPROPRIATE] What types of things have relatives done for you and your family?

5. How many people (excluding partner) could you call on for help if you were having trouble?
- □ No one
- □ 1 or 2 people
- □ 3-5 people
- □ 6-9 people
- □ 10 or more

LIVING IN THE COMMUNITY

1. Have you moved since our last interview?

□ No → [GO TO QUESTION #9]

□ Yes →

1A) How many different places have you lived? _____

2. Is your current home now adequate for your needs?

□ No →

□ Yes

2A) What makes your current home inadequate?

3. [IF LIVING IN A DIFFERENT COMMUNITY FROM PREVIOUS INTERVIEW]
There are many community services that families need to know how to access, and what each family needs may be very different.
I would like to know about the kinds of community services you know about.
[ADMINISTER KNOWLEDGE OF COMMUNITY RESOURCES MEASURE]

4. Were you without you own home (homeless) at any point since our last interview?

□ Yes

□ No

[FOR ALL PARTICIPANTS]

5. Do you feel safe where you live? Yes □ No □ Why or why not?

TRANSPORTATION

1. [IF FAMILY OWNED VEHICLE AT LAST INTERVIEW BEGIN HERE]
At our last interview, you said … *(reliable/unreliable vehicle?)*
Has that changed?

Transportation notes from previous interviews:

2. Since our last interview, have you had any problems with your vehicle(s)?

□ Yes →

2A) Tell me about what happened. What did you do?

2B) Do you still own a vehicle?
- ❑ Yes → **[GO TO QUESTION #5]**
- ❑ No → **[GO TO QUESTION #4]**

□ No →

2C) **[GO TO QUESTION #5]**

3. [IF NO VEHICLE AT LAST INTERVIEW BEGIN HERE]
Last time we talked you said…
Since our last interview, have you gotten a vehicle?

□ No →

3A) Do you still depend on …?
**[GO TO QUESTION #4]**

□ Yes →

3B) **[GO TO QUESTION**

4. [IF FAMILY DOES NOT CURRENTLY OWN CAR] How does your family's not owning a car affect how you get to appointments (medical, welfare, etc.), work or training programs? [GO TO QUESTION #6]

5. [IF FAMILY CURRENTLY OWNS CAR] If your car breaks down or is not available to you, how do you get to work, appointments, and the grocery store, etc.?

6. How long does it take you …
a. … to get to work?
b. … to get to medical appointments?
c. … to get to welfare appointments?

7. Have you ever had to miss work or a training program because of a transportation problem?

□ Yes →

7A) How did your supervisor react?

□ No

EMPLOYMENT/CURRENT WORK

A. PARTICIPANT'S EMPLOYMENT/CURRENT WORK

1. Since our last interview, have you gotten any further education or training?

□ Yes →
□ No

| |
|---|
| 1A) Tell me about that. What kind was it and where did you do it?<br>1B) How did you pay for it? |

[IF RESPONDENT *WAS WORKING* AT WAVE 2, *BEGIN HERE*]
[IF RESPONDENT *WAS NOT WORKING* AT WAVE 2, GO TO *QUESTION #7*]

***Participant employment information from wave 2:*** ***Date Amount***

| | Wage/Salary | Started | Hours/wk | Weeks/yr | of Raise |
|---|---|---|---|---|---|
| Job 1_____ | _____ | _____ | _____ | _____ | _____ |
| Job 2_____ | _____ | _____ | _____ | _____ | _____ |

| **JOB 1** | | | | **JOB2** | | | |
|---|---|---|---|---|---|---|---|
| Health insurance for yourself | Yes □ | No □ | DK □ | Health insurance for yourself | Yes □ | No □ | DK □ |
| Health insurance for children | Yes □ | No □ | DK □ | Health insurance for children | Yes □ | No □ | DK □ |
| Sick leave | Yes □ | No □ | DK □ | Sick leave | Yes □ | No □ | DK □ |
| Vacation | Yes □ | No □ | DK □ | Vacation | Yes □ | No □ | DK □ |
| Overtime | Yes □ | No □ | DK □ | Overtime | Yes □ | No □ | DK □ |
| Retirement plan | Yes □ | No □ | DK □ | Retirement plan | Yes □ | No □ | DK □ |

2. At our last interview you said you were working at _____. Are you still working there?

□ No → [GO TO QUESTION #5]
□ Yes

3. How is your job/work going for you? Has anything changed about your job? Such as….

Different responsibilities Yes □ No □
Different hours Yes □ No □
Have you had a raise, promotion, or received new benefits?

□ Yes →
□ No

3A) When? _____ How much? _____What kind of benefits?_____

3B) Has the raise, promotion, or new benefits changed your family life in any way? (such as new hours or longer hours)

4. Do you have any additional jobs?

□ Yes →

4A) Why did you get an additional job?
4B) Tell me about your other job(s).
4C) **[FILL OUT JOB 2 ON CHART BELOW [Question**
4D) **[GO TO B. Partner's Employment/Current**

□ No →

4E) **[GO TO B. Partner's Employment/Current Work]**

5. What happened with that job? (PROBE: Why did you leave that job?)

6. Are you currently working?

□ Yes → [FILL OUT CHART BELOW [Question #8]]
□ No →

6A) Have you looked for work?

□ Yes→How has that gone?
Have you held any other jobs since our last interview?
Tell me about that/them.
**[GO TO B. Partner's Employment/Current Work]**

□ No→For what reasons are you not looking for work?
Have you held any other jobs since our last interview?
Tell me about that/them.
**[GO TO B. Partner's Employment/Current Work]**

[IF RESPONDENT *WAS NOT WORKING* LAST YEAR, *BEGIN HERE*]

7. At our last interview, you said you were not working. Are you working now?

□ Yes → [FILL OUT CHART BELOW [Question #8]]

□ No →

7A) Have you looked for work?

□ Yes→How has that gone?
Have you held any jobs since our last interview?
Tell me about that/them.
**[GO TO B. Partner's Employment/Current Work]**

□ No →For what reasons are you not looking for work?
Have you held any jobs since our last interview?
Tell me about that/them.
**[GO TO B. Partner's Employment/Current Work]**

8. [IF YES, PARTICIPANT IS WORKING AT A NEW JOB] Tell me about the job(s) you have now. How did you find this job? Did you know somebody who already worked there? (PROBE to fill in chart: Where are you working now? What is it that you do? Are you working full-time or part-time?)

| Participant employment | Wage/Salary | Date Started | Hours/wk | Weeks/yr | Amount Raise |
|---|---|---|---|---|---|
| Job 1 _____ | _____ | _____ | _____ | _____ | _____ |
| Job 2 _____ | _____ | _____ | _____ | _____ | _____ |

(**PROBE to fill in chart:** Do you get any benefits with this new job(s)?)
JOB 2 information

| | | |
|---|---|---|
| Health insurance for yourself | Yes □ No □ DK □ | Yes □ No □ DK □ |
| Health insurance for children | Yes □ No □ DK □ | Yes □ No □ DK □ |
| Sick leave | Yes □ No □ DK □ | Yes □ No □ DK □ |
| Vacation | Yes □ No □ DK □ | Yes □ No □ DK □ |
| Overtime | Yes □ No □ DK □ | Yes □ No □ DK □ |
| Retirement plan | Yes □ No □ DK □ | Yes □ No □ DK □ |

9. [IF WORKING AT WAVE 1 OR 2] How does this job compare to your old job? Why do you say that? Has the new job made any difference in your family life?
(PROBE: wages, hours, etc.)

B. PARTNER'S EMPLOYMENT/CURRENT WORK
[IF RESPONDENT HAS *SAME PARTNER* WHO *WAS WORKING* AT WAVE 2, *BEGIN HERE*]
[IF RESPONDENT HAS *SAME PARTNER* WHO *WAS NOT WORKING* AT WAVE 2, GO TO QUESTION #6]
[IF *NEW PARTNER,* GO TO QUESTION #9]

| Participant employment | Wage/Salary | Date Started | Hours/wk | Weeks/yr | Amount Raise |
|---|---|---|---|---|---|
| Job 1 _____ | _____ | _____ | _____ | _____ | _____ |
| Job 2 _____ | _____ | _____ | _____ | _____ | _____ |

(**PROBE to fill in chart:** Do you get any benefits with this new job(s)?)
JOB 2 information

| | | |
|---|---|---|
| Health insurance for yourself | Yes □ No □ DK □ | Yes □ No □ DK □ |
| Health insurance for children | Yes □ No □ DK □ | Yes □ No □ DK □ |
| Sick leave | Yes □ No □ DK □ | Yes □ No □ DK □ |
| Vacation | Yes □ No □ DK □ | Yes □ No □ DK □ |
| Overtime | Yes □ No □ DK □ | Yes □ No □ DK □ |
| Retirement plan | Yes □ No □ DK □ | Yes □ No □ DK □ |

10. Last time we talked, you said _____ was working at _____.
Is he/she still working there?
□ No → [GO TO QUESTION #4]
□ Yes

11. Has anything changed about his/her job? Such as….
Different responsibilities Yes □ No □
Different hours Yes □ No □
Has he/she had a raise, promotion, or received new benefits?
□ Yes →
□ No

11A) When? _____ How much? _____What kind of benefits?_____
11B) Has the promotion, raise, or new benefits changed your family life in any way? (such as new hours or longer hours)

12. Does he/she have any additional jobs?

□ Yes →

12A) Why did he/she get an additional job?
12B) Tell me about his/her other job(s).
12C) [FILL OUT JOB 2 ON CHART BELOW [Question #7]]
12D) [GO TO C. Other Employment]

/

□ No →

12E) [GO TO C. Other Employment]

13. Can you share with me what happened and why he/she is not working at the same job? (PROBE: Why did he/she leave the other job?)

14. Is he/she currently working?

□ Yes → [FILL OUT CHART BELOW [Question #7]]

□ No →

5A) Has he/she looked for work?

□ Yes → How has that gone?
Has he/she held any other jobs since our last interview?
Tell me about that/them?
[GO TO C. Other Employment]

□ No → For what reasons is he/she not looking for work?
Has he/she held any other jobs since our last interview?
Tell me about that/them?
[GO TO C. Other Employment]

[IF RESPONDENT HAS *SAME PARTNER* WHO *WAS NOT WORKING* AT WAVE 2, *BEGIN HERE*]

15. At the last interview you said _____ was not working. Is he/she working now?

□ Yes → [FILL OUT CHART BELOW [Question #7]]

□ No →

15A) Has he/she looked for work?

□ Yes →How has that gone?
Has he/she held any jobs since our last interview?
Tell me about that/them?
[GO TO C. Other Employment]

□ No →For what reasons has he/she chosen not to look for work?
Has he/she held any jobs since our last interview?
Tell me about that/them?
[GO TO C. Other Employment]

16. [IF YES, SAME PARTNER WORKING AT A NEW JOB] Tell me about his/her job(s). (PROBE: How did he/she find out about the job? Did he/she know someone already working there? Where is he/she working now? What is it that he/she does? Is he/she working full-time or part-time? (PROBE to fill in chart.)

| Partner employment | Wage/Salary | Date Started | Hours/wk | Weeks/yr | Amount Raise |
|---|---|---|---|---|---|
| Job 1 _____ | _____ | _____ | _____ | _____ | _____ |
| Job 2 _____ | _____ | _____ | _____ | _____ | _____ |

(**PROBE to fill in chart:** Do you get any benefits with this new job(s)?)
JOB 2 information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Health insurance for yourself | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |
| Health insurance for children | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |
| Sick leave | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |
| Vacation | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |
| Overtime | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |
| Retirement plan | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |

17. [IF WORKING AT WAVE 1 OR 2] How does this job compare to his/her old job? Why do you say that?

[IF RESPONDENT HAS *A NEW PARTNER, BEGIN HERE*]

18. Is your partner employed?

□ Yes → [FILL OUT CHART ON NEXT PAGE [Question #10]]

□ No →

18A) Has he/she looked for work?

□ Yes →How has that gone?
Has he/she held any jobs since you've lived together?
Tell me about that/them?
[GO TO C. Other Employment]

□ No →For what reasons is he/she not looking for work?
Has he/she held ant jobs since you've lived together?
Tell me about that/them?
[GO TO C. Other Employment]

19. [IF YES, NEW PARTNER IS WORKING] Tell me about his/her current job(s). (PROBE to fill in chart: Where is he/she working now? What is it that he/she does? Is he/she working full-time or part-time? )

| New Partner employment | Wage/Salary | Date Started | Hours/wk | Weeks/yr | Amount Raise |
|---|---|---|---|---|---|
| Job 1 _____ | _____ | _____ | _____ | _____ | _____ |
| Job 2 _____ | _____ | _____ | _____ | _____ | _____ |

(**PROBE to fill in chart:** Do you get any benefits with this new job(s)?)
JOB 2 information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Health insurance for yourself | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |
| Health insurance for children | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |
| Sick leave | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |
| Vacation | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |
| Overtime | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |
| Retirement plan | Yes □ | No □ | DK □ | | Yes □ | No □ | DK □ |

C. OTHER EMPLOYMENT

1. Does anyone else in the household have a job? (PROBE: Do any children have a job?)

□ Yes →
□ No

| 1A) Tell me about |
|---|

2. [IF RESPONDENT IS CURRENTLY WORKING] Is there anything in your life that makes it more difficult for you to hold down a job (or participate in a training program)? What about … (PROBE to fill in chart)

| | | | |
|---|---|---|---|
| Childcare | No □ | Yes□ | [FOR ALL "YES" RESPONSES] Tell me about that. |
| Transportation | No □ | Yes□ | |
| Health issues | No □ | Yes□ | |
| Family issues | No □ | Yes□ | |
| Your partner | No □ | Yes□ | |

3. [IF PARTICIPANT IS NOT CURRENTLY WORKING] Since you are not currently working outside the home, is there anything in your life that makes it more difficult for you to work or participate in a training program? What about …(PROBE to fill in chart)

| | | | |
|---|---|---|---|
| Childcare | No ☐ | Yes ☐ | [FOR ALL "YES" RESPONSES] Tell me about that. |
| Transportation | No ☐ | Yes☐ | |
| Health issues | No ☐ | Yes☐ | |
| Family issues | No ☐ | Yes☐ | |
| Your partner | No ☐ | Yes☐ | |

INCOME AND MAKING ENDS MEET

1. We would like to know about your family's sources of income. Remember, all of this information is completely confidential. From which of the following did you receive income this year? (PROBE for changes in TANF, child and spousal support, food stamps, wages: Has that been the same all year? Tell me about the change.)

| | Amount | Weekly | Biweekly | Monthly | Other |
|---|---|---|---|---|---|
| Wages & Salaries (self) | _____ | ☐ | ☐ | ☐ | ☐ |
| Wages & Salaries (partner) | _____ | ☐ | ☐ | ☐ | ☐ |
| Tips, Commissions, Overtime | _____ | ☐ | ☐ | ☐ | ☐ |
| Social Security Disability | _____ | ☐ | ☐ | ☐ | ☐ |
| Social Security Retirement/ Pensions | _____ | ☐ | ☐ | ☐ | ☐ |
| Supplementary Security Income (SSI) | _____ | ☐ | ☐ | ☐ | ☐ |
| TANF | _____ | ☐ | ☐ | ☐ | ☐ |
| Unemployment Compensation | _____ | ☐ | ☐ | ☐ | ☐ |
| Worker's Disability Compensation | _____ | ☐ | ☐ | ☐ | ☐ |
| Veterans' Benefits | _____ | ☐ | ☐ | ☐ | ☐ |
| Child or Spousal Support | _____ | ☐ | ☐ | ☐ | ☐ |
| Children's wages | _____ | ☐ | ☐ | ☐ | ☐ |
| Food Stamps | _____ | ☐ | ☐ | ☐ | ☐ |
| Regular gifts from family/friends | _____ | ☐ | ☐ | ☐ | ☐ |
| Income Tax Refund | _____ | ☐ | ☐ | ☐ | ☐ |
| Other, including odd jobs | _____ | ☐ | ☐ | ☐ | ☐ |

2. Have you ever received TANF benefits?

□ Yes →

□ No

***2A) How much time do you have on your TANF clock?***

3. Did you receive assistance from any of the following sources since our last interview? If so, how much?

[RECORD CASH VALUE]

| | | Amount | Weekly | Biweekly | Monthly | Other |
|---|---|---|---|---|---|---|
| WIC | Yes □ No □ | _____ | □ | □ | □ | □ |
| School Lunch/ Breakfast Program | Yes □ No □ | _____ | □ | □ | □ | □ |
| Food Stamps | Yes □ No □ | _____ | □ | □ | □ | □ |
| Earned Tax Credit | Yes □ No □ | _____ | □ | □ | □ | □ |
| Childcare Assistance | Yes □ No □ | _____ | □ | □ | □ | □ |
| Housing Assistance (**PROBE:** Do you receive any help paying the rent/mortgage?) | Yes □ No □ | _____ | □ | □ | □ | □ |
| Energy/fuel Assistance | Yes □ No □ | _____ | □ | □ | □ | □ |
| Transportation Assistance | Yes □ No □ | _____ | □ | □ | □ | □ |
| Education Grants or Loans | Yes □ No □ | _____ | □ | □ | □ | □ |
| Medicaid | Yes □ No □ | XXXXXXX | | | | |
| Diversionary **[IF APPLICABLE]** | Yes □ No □ | _____ | □ | □ | □ | □ |
| Other [describe]_____ | Yes □ No □ | _____ | □ | □ | □ | □ |

4. Housing is usually the largest expense for families.

Do you…

□ own? →

4A) What is your monthly mortgage bill? _____

OR

□ rent? →

4B) What is your monthly rental bill? _____

4C) **[IF TRAILER]** What is your monthly lot rental bill? _____

OR

□ other? →

4D) Please describe.

4C) What is your monthly bill? _____

5. Since our last interview, did you ever have a difficult time paying for your rent or mortgage?
   - □ Yes
   - □ No
   - □ No; someone else paid

6. About how much do you pay each month for the utilities?

| | Included in Rent | Pays | Amount | In winter? |
|---|---|---|---|---|
| Electricity | Yes □ No □ | Yes □ No □ | how much per month?_____ | |
| Gas/Oil/Wood/ Coal | Yes □ No □ | Yes □ No □ | how much per month?_____ | |
| Cable TV | Yes □ No □ | Yes □ No □ | how much per month?_____ | |
| Water | Yes □ No □ | Yes □ No □ | how much per month?_____ | |
| Garbage | Yes □ No □ | Yes □ No □ | how much per month?_____ | |

7. Since our last interview, did you ever have a difficult time paying for the utilities?

   - □ Yes
   - □ No
   - □ No; someone else paid

8. Do you have telephone service?
   - □ Yes →
   - □ No

   10A) About how much do you pay each month? _____

9. Have you had a problem paying for phone service since our last interview?
   - □ Yes
   - □ No
   - □ No, have not had phone service during this time

10. Since our last interview, have you had a problem paying for any specific items?

| | | |
|---|---|---|
| Food | No □ | Yes □ |
| Clothing | No □ | Yes □ |
| Medical care | No □ | Yes □ |
| Dental care | No □ | Yes □ |
| Medicines | No □ | Yes □ |
| Credit payments | No □ | Yes □ |
| Personal care items | No □ | Yes □ |
| Diapers | No □ | Yes □ |
| School fees or expenses | No □ | Yes □ |
| Property/school taxes | No □ | Yes □ |
| Childcare | No □ | Yes □ |
| Car repair/ maintenance | No □ | Yes □ |
| Anything else | No □ | Yes □ |

(For example: insurance, loan payments, etc )

[FOR ALL YES RESPONSES]
12A) What have you done when this happened?

11. When people are having a hard time making ends meet, sometimes they will work for cash by doing different kinds of odd jobs. Since our last interview, have you done anything like that? (PROBE: Cleaned homes? Collected bottles/cans? Mowed lawns? Shoveled snow?)

□ Yes →
□ No

11A) What did you do? _____
11B) For how long? _____
11C) How much did you earn? _____

12. [IF HAS PARTNER] Since our last interview, has your partner done anything like that?

□ Yes →
□ No

12A) What did he/she do? _____
12B) For how long? _____
12C) How much did he/she earn? _____

13. Compared with last year, would you say that your family's financial situation has... [CIRCLE NUMBER OF RESPONSE]

5 Improved a lot
4 Improved a little
3 Remained the same
2 Gone down a little
1 Gone down a lot

14. [RESTATE RESPONSE FROM QUESTION #19] What leads you to say that?

15. To what extent to do you think your income is enough for you to live on? [CIRCLE NUMBER OF RESPONSE]

1 Not at all adequate
2 Can meet necessities only
3 Can afford some of the things we want but not all we want
4 Can afford about everything we want
5 Can afford about everything we want and still save money

16. [IF CHOOSES 2 OR 3 FROM QUESTION #21] When you think of necessities, what do you think of?

LIFE SKILLS SECTION

1. In general, how often are you able to pay your bills?

□ Always
□ Sometimes
□ Never

2. In general, how often are you able to stick to a family budget?

□ Always
□ Sometimes
□ Never

3. In general, how often are you able to stretch your groceries to the end of the month?

□ Always
□ Sometimes
□ Never

4. In general, how often are you able to prepare a well-balanced meal for your family?

□ Always
□ Sometimes
□ Never

FOOD SECURITY

1. Since our last interview, have you or any members of your household, been close to going hungry or ever gone hungry?

□ Yes →
□ No

1A) Tell me how this happened. What led to your being hungry?

2. Have you gotten food from a food bank or soup kitchen since our last interview?

□ Yes →
□ No

2A) Tell me about this.
2B) How often?

3. [ADMINISTER FOOD SECURITY MODULE]

HEALTH

A. ADULT HEALTH

1. At the previous interviews you mentioned that you… *(describe health conditions from previous interviews)*.
How has your health been since your last interview?

2. Have there been any changes in your health?

3. Have you developed any new medical conditions?

□ Yes →
□ No

3A) Please explain.

Health Notes from Previous Interviews
Participant:

4. Since the last interview, have you had any injuries, surgeries, or serious illnesses?

□ Yes →
□ No

4A) Please explain.

5. Since the last interview, have any of your health problems

□ Yes →
□ No

5A) Please explain.

6. Have you been pregnant (again) since the last interview?

□ Yes →
□ No

6A) How many times?

New Health Conditions

Participant:

[FOR SAME PARTNER]

7. At the previous interviews you mentioned that your partner… *(describe health conditions from previous interviews).*
How has your partner's health been since the last interview?

| Health Notes from Previous Interviews |
|---|
| Partner: |

8. Have there been any changes in your partner's health?

9. Has your partner developed any new medical conditions?

□ Yes → 9A) Please explain.
□ No

10. Since the last interview, has your partner had any injuries, surgeries, or serious illnesses?

□ Yes → 10A) Please explain.
□ No

| New Health Conditions |
|---|
| Partner: |

11. Since the last interview, have any of your partner's health problems resolved?

□ Yes → 11A) Please explain.
□ No

12. [FOR NEW PARTNER] We'd like to hear about your partner's health.→ 12A) Administer Adult Health Problems.

13. [ADMINISTER ADULT HEALTH SURVEY.]

14. [ADMINISTER SF-36 TO PARTICIPANT ONLY.]

B. CHILD HEALTH

1. At the previous interviews you mentioned that _____(*C1's name*) …
*(describe health conditions from previous interviews).*

How has _____'s (*C1's name*) health been since the last interview?

| Health Notes from Previous Interviews |
|---|
| C1: |
| C2: |
| C3: |
| C4: |
| Etc: |

2. Have there been any changes in _____'s (*C1's name*) health?

3. Has _____ *(C1's name)* developed any new medical conditions?

□ Yes → 3A) Please explain.
□ No

| New Health Conditions: | | | | | |
|---|---|---|---|---|---|
| C1: | C2: | C3: | C4: | C5: | C6 : |
| | | | | | |

4. Since the last interview, has _____ *(C1's name*) had any injuries, surgeries, or serious illnesses?

□ Yes → 4A) Please explain.
□ No

5. Since the last interview, have any of _____ *(C1's name)* health problems resolved?

□ Yes → 5A) Please explain.
□ No

6. [REPEAT FOR EACH CHILD WHO WAS LIVING IN HOUSEHOLD AT EITHER WAVE 1 OR WAVE 2]

7. [FOR EACH NEW CHILD LIVING IN HOUSEHOLD]
We'd like to hear about _____'s *(child's name)* health. → **7A) Administer Child Health Problems.**

8. [ADMINISTER CHILD HEALTH SURVEY.]

CHILD CARE

1. Last time we talked, you said that*(describe care situation for preschool children)*…
   Have you made any changes in your child care arrangements since the last interview?
   □ Yes
   □ No

2. Since our last interview, have you had to miss work or a training program because of a childcare problem?
   □ Yes →
   □ No

| 9A) How did your supervisor react? |
|---|

PARENTING

1. Overall, how do you feel about the amount of support you have for parenting in your life?

PERSONAL WELL-BEING

1. Last year, you said the thing you were most looking forward to was_____.
   How is that going?
*{OR WHATEVER THE APPROPRIATE FOLLOW-UP QUESTION(S) MAY BE.}*

2. I'd like to ask you a few questions about how things are going for you personally.
[ADMINISTER FEELINGS ABOUT HOW THINGS ARE GOING MEASURE.]

3. Overall, how satisfied are you with your life right now?
   [CIRCLE NUMBER OF RESPONSE]
   5 Very satisfied
   4 Satisfied
   3 Mixed feelings
   2 Dissatisfied
   1 Very dissatisfied

| Well-Being notes from previous interviews: |
|---|

Now I'd like to ask you a few questions about how things are going for you with the family members living in your household.

4. I am satisfied that I can turn to my family for help when something is troubling me.
   4 always
   3 almost always
   2 some of the time
   1 hardly
   0 never

5. I am satisfied with the way my family talks over things with me and shares problems with me.
   4 always
   3 almost always
   2 some of the time
   1 hardly
   0 never

6. I am satisfied that my family accepts and supports my wishes to take on new activities or directions.
   4 always
   3 almost always
   2 some of the time
   1 hardly
   0 never

7. I am satisfied with the way my family expresses affection and responds to my emotion, such as anger, sorrow, or love.
   4 always
   3 almost always
   2 some of the time
   1 hardly
   0 never

8. I am satisfied with the way my family and I share time together.
   4 always
   3 almost always
   2 some of the time
   1 hardly
   0 never

9. What would make life better for your family? Why do you feel that way?

SUMMARY

1. Think of an ideal community for you and your children. What change in this community would make the biggest improvement for families like yours? (Probe: For example, would you like to see changes in the school system, job opportunities, health care, services that are available in the community…)

2. If there were job training programs or education programs in this community, do you think that you or your partner would be interested? How would you like to find out about programs like this in the community? What might keep you from being involved in a training program right now?

3. In what ways has participating in this study affected your life?

There are many community services that families need to know how to access. The services needed are different for each family. If you needed it, would you know where to go to:

Table C. 1. Knowledge of Community Resources

| Service | Yes | No |
|---|---|---|
| 1. Get help on heating bills | | |
| 2. Apply for subsidized housing | | |
| 3. Find temporary housing | | |
| 4. Apply for Medicaid/MA | | |
| 5. Find help for a drug or alcohol problem | | |
| 6. Find help for a domestic violence problem | | |
| 7. Get your child immunized | | |
| 8. Find a family doctor | | |
| 9. Find dental care | | |
| 10 Find a mental health counselor | | |
| 11. Find family planning services | | |
| 12. Apply for welfare | | |
| 13. Get legal assistance | | |
| 14. Apply for food stamps | | |
| 15. Apply for WIC | | |
| 16. Locate job training | | |
| 17. Find transportation choices | | |
| 18. Find child care | | |
| 19. Apply for a child care subsidy | | |
| 20. Find help for a family member with disabilities | | |
| 21. Find low-cost clothing for your family | | |
| 22. Find Cooperative Extension Service activities (4H, etc.) | | |
| 23. Find Loans to assist you | | |
| 24. Find sources of financial assistance | | |
| 25. Obtain assistance in using the Internet | | |
| 26. Use the Internet | | |

## FOOD SECURITY MODULE

These next questions ask about the food eaten in your household in the last 12 months, since (current month) of last year, and whether you were able to afford the food you need.

1. Which of these statements best describes the food eaten in your household in the last 12 months? **[READ LIST, CIRCLE NUMBER OF RESPONSE]**

[1] Enough of the kinds of food we want to eat. **[Go TO Q2]**
[2] Enough but not always the kinds of foods we want. **[GO TO Q1b]**
[3] Sometimes not enough to eat **[GO TO Q1a]**
[4] Often not enough to eat **[GO TO Q1a]**
[5] DK or no answer **[Go TO Q2]**

**1a**. **[IF ANSWERED 3 OR 4 ABOVE]** Here are some of the reasons why people don't always have enough to eat. For each one, please tell me if that is a reason why you don't always have enough to eat**. [READ LIST, CIRCLE RESPONSE]**

| | | | |
|---|---|---|---|
| Not enough money for food | YES | NO | DK |
| Not enough time for shopping or cooking | YES | NO | DK |
| Too hard to get to the store | YES | NO | DK |
| On a diet | YES | NO | DK |
| No working stove available | YES | NO | DK |
| Not able to cook because of health problems | YES | NO | DK |

**1b. [IF ANSWERED 2 ABOVE]** Here are some reasons why people don't always have the quality or variety of food they want. For each one, please tell me if that is a reason why YOU don't always have the kinds of food you want to eat. **[READ LIST, CIRCLE RESPONSE]**

| | | | |
|---|---|---|---|
| Not enough money for food | YES | NO | DK |
| Kinds of food we want not available | YES | NO | DK |
| Not enough time for shopping or cooking | YES | NO | DK |
| Too hard to get to the store | YES | NO | DK |
| On a special diet | YES | NO | DK |

**[ASK ALL RESPONDENTS]** Now I'm going to read you several statements that people have made about their food situation. For each of these statements, please tell me whether the statement is o*ften true, sometimes true,* or *never true* for your household in the last 12 months, that is, since last (name of current month).

2. The first statement is: "We worried whether our food would run out before we got money to buy more." Was that o*ften true, sometimes true*, or *never true* for your household in the last 12 months? **[CHECK RESPONSE BOX]**

- ☐ Often true
- ☐ Sometimes true
- ☐ Never true
- ☐ DK or no answer

3. "The food that we bought just didn't last, and we didn't have money to get more." Was that *often, sometimes*, or *never true* for your household in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or no answer

4. "We couldn't afford to eat balanced meals." Was that *often, sometimes*, or *never true* for your household in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or no answer

5. I (we) relied on only a few kinds of low-cost food to feed my (our) children because I was (we were) running out of money to buy food." Was that *often, sometimes*, or *never true* for your household in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or no answer

6. I (we) couldn't feed my (our) child (children) a balanced meal because I couldn't afford that." Was that *often, sometimes*, or *never true* for your household in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or no answer

**[IF ANSWERED *NEVER TRUE* TO ALL 5 OF THE ABOVE QUESTIONS (Q2 THRU Q6), AND ANSWERED "1" OR "2" TO Q1, STOP HERE. OTHERWISE CONTINUE.]**

7. My (our) child (children) was (were) not eating enough because I (we) just couldn't afford enough food. Was that *often, sometimes*, or *never true* for your household in the last 12 months?

- Often true
- Sometimes true
- Never true
- DK or no answer

8. In the last 12 months, since last (name of current month), did you (or other adults in you household) ever cut the size of your meals or skip meals because there wasn't enough money for food?

- Yes **[GO TO Q8a]**
- No **[GO TO Q9]**
- DK or no answer **[GO TO Q9]**

8a. **[If YES]** How often did this happen – almost every month, some months but not every month, or in only 1 or 2 months?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- DK or no answer

9. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food?

- Yes
- No
- DK or no answer

10. In the last 12 months, were you ever hungry but didn't eat because you couldn't afford enough food?

- Yes
- No
- DK or no answer

11. In the last 12 months, did you lose weight because you didn't have enough money for food?

- Yes
- No
- DK or no answer

**[IF ANSWERED *NO* TO ALL OF THE 4 PREVIOUS QUESTIONS (Q8 THRU Q11), STOP HERE. OTHERWISE CONTINUE.]**

12. In the last 12 months, did you (or other adults in your household) ever **not** eat for a whole day because there wasn't enough money for food?

- Yes **[GO TO Q12a]**
- No **[GO TO Q13]**
- DK or no answer **[GO TO Q13]**

12a**. [If YES]** How often did this happen – almost every month, some months but not every month, or in only 1 or 2 months?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- DK or no answer

13. The next questions are about children living in the household who are under 18 years old. In the last 12 months, since (current month) or last year, did you ever cut the size of your child's (children's) meals because there wasn't enough money for food?

- Yes
- No
- DK or no answer

14. In the last 12 months, did any child ever skip meals because there wasn't enough money for food?

- Yes **[GO TO Q14a]**
- No **[GO TO Q15]**
- DK or no answer **[GO TO Q 15]**

14a. **[If YES]** How often did this happen – almost every month, some months but not every months, or in only 1 or 2 months?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- DK or no answer

15. In the last 12 months, was any child in the household ever hungry, but you just couldn't afford more food?

- Yes
- No
- DK or no answer

16. In the last 12 months, did any child ever not eat for a whole day because there wasn't enough money for food?

- Yes
- No
- DK or no answer

**ADULT HEALTH SURVEY**

1. Do you have medical insurance?
Yes_____ No_____

2. [If YES] What kind?
- Private/HMO
- Medicaid/MA
- State Health Plan
- Other (Explain)

3. Does your partner have medical insurance?
Yes_____ No_____

4. [If YES] What kind?
- Private/HMO
- Medicaid/MA
- State Health Plan
- Other (Explain)

5. Do you have dental insurance?
Yes_____ No_____

6. [If YES] What kind?
- Private
- Medicaid/MA
- Other (explain)

7. Does your partner have dental insurance?
Yes_____ No_____

8. [If YES] What kind?
- Private
- Medicaid/MA
- Other (explain)

9. About how many times have you seen a doctor or other healthcare provider since the last interview?

10. [For SAME PARTNER] About how many times has your partner seen a doctor or other healthcare provider since the last interview?

11. [For NEW PARTNER] About how many times has your partner seen a doctor or other healthcare provider in the last year?

12. [If NONE] When was the last time your partner saw a doctor or other healthcare provider?

13. Has there ever been a time when you needed to see a doctor or go to the hospital but didn't go?
Yes____ No_____

14. [If YES] Tell me about this. _____
_____

15. Has there ever been a time when your partner needed to see a doctor or go to the hospital but didn't go?
Yes____ No_____

16. [If YES] Tell me about this. _____

17. About how many times have you visited a dentist since the last interview?
_____

18. [For SAME PARTNER] About how many times has your partner visited a dentist since the last interview?
_____

19. [For NEW PARTNER] About how many times has your partner visited a dentist in the last year?
_____

20. [If NONE] When was the last time your partner visited a dentist?
_____

21. Has there ever been a time when you wanted or needed to see a dentist but didn't go?
Yes____ No_____

22. [If YES] Tell me about this._____
_____

23. Has there ever been a time when your partner wanted or needed to see a dentist but didn't go?
Yes____ No_____

24. [If YES] Tell me about this.
_____

## ADULT HEALTH SURVEY (CONT)

25. Since the last interview, how many days have you missed work due to an illness, injury, surgery, or pregnancy?

26. [For SAME PARTNER] Since the last interview, how many days has your partner missed work due to an illness, injury, or surgery?

27. [For NEW PARTNER] How many days has your partner missed work due to an illness, injury, or surgery in the last year?

28. Have you or your partner ever postponed filling, or not filled, a prescription for medicine for yourselves?
Yes_____ No_____

_____

29. [If YES] For what reasons?

30. Have you or your partner ever used a medicine differently from how it was prescribed?
Yes_____ No_____

31. [If YES] For what reasons? ____

First name of: Child 1:_____ Child 2: _____ Child 3: _____

## CHILD HEALTH SURVEY

1.Does C1 have medical insurance?
□ Yes □ No
2.[If YES] What kind?
- Private/HMO
- Medicaid/MA
- State Plan
- Other (Explain): _____

3.Does C2 have medical insurance?
□ Yes □ No
4.[If YES] What kind?
- Private/HMO
- Medicaid/MA
- State Plan
- Other (Explain): _____

5.Does C3 have medical insurance?
□ Yes □ No

6.[If YES] What kind?
- Private/HMO
- Medicaid/MA
- State Plan
- Other (Explain): _____

7.About how many times has your child been to a doctor or other health care provider since the last interview?
C1 _____ C2 _____ C3 _____

11.Does C1 have any type of dental insurance? □ Yes □ No
12.[If YES] What kind?
- Private
- Medicaid/MA
- Other (Explain): _____ _____ _____

13.Does C2 have any type of dental insurance? □ Yes □ No
14.[If YES] What kind?
- Private
- Medicaid/MA
- Other (Explain): _____ _____ _____

15.Does C3 have any type of dental insurance? □ Yes □ No
16.[If YES] What kind?
- Private
- Medicaid/MA
- Other (Explain): _____ _____ _____

17.About how many times since the last interview has your child visited a dentist?
C1 _____ C2 _____ C3 _____

18.[If NONE] When was the last time your child visited a dentist?

21.Has there ever been a time when your child needed to see a dentist but didn't go? [Record **yes** or **no**.]
C1 _____ C2 _____ C3 _____
22.[If YES] Tell me about this.
C1_____ _____
C2_____ _____
C3_____ _____

23.Have you or your partner ever postponed filling, or not filled, a prescription for medicine for your child? [Record **yes** or **no**.]
C1 _____ C2 _____ C3 _____
24.[If YES] Tell me about this.
_____ _____ ___ _____ ___

25.Have you or your partner ever given a medicine to your child differently from how it was prescribed? [Record **yes** or **no**.]

8.Has there ever been a time when your child needed to see a doctor or go to the hospital but didn't go? [Record **yes** or **no**.]
C1 _____ C2 _____ C3 _____

9.[If YES] Tell me about this.
C1_____
_____
C2_____
_____
C3_____
_____

10.Since the last interview, about how many days has your child missed school or daycare due to an illness/injury?
C1:
_____
C2:
_____
C3:
_____

C1 _____ C2 _____ C3 _____

*19.[If approx. date given] When will your child next visit a dentist? Please explain.*
C1_____
_____
C2_____
_____
C3_____
_____

20.[If has NEVER visited dentist] For what reasons has your child not been to a dentist?
C1
_____
____
C2
_____
____
C3
_____
____

C1 ____ C2 ____ C3 ____

26.[If YES] Tell me about this.
_____
_____
___
_____
___

27.Since the last interview, how many days have you missed work because your child(ren) was/were ill, injured, or recovering from surgery?
_____

28.Since the last interview, how many days has your partner missed work because your child(ren) was/were ill, injured, or recovering from surgery?
_____

## ADULT HEALTH PROBLEMS

**[ADMINISTER TO NEW PARTNER]**
In the past 3 years, has your partner experienced any of the following health problems?

| | Partner | | Partner |
|---|---|---|---|
| Heart Problems | ☐ | Joint Problems | ☐ |
| High Blood Pressure | ☐ | Chronic Pain | ☐ |
| Diabetes | ☐ | Eating Disorder/ Overweight | ☐ |
| Cancer | ☐ | Skin Problems | ☐ |
| Digestive Problems | ☐ | Permanent Disability | ☐ |
| Liver Problems | ☐ | Sexually Transmitted Disease | ☐ |
| Seizure Disorder | ☐ | Reproductive Problems | ☐ |
| Depression/Anxiety | ☐ | Bladder Infections | ☐ |
| Anger Management | ☐ | Drug Problem | ☐ |
| Hepatitis | ☐ | Alcohol Problem | ☐ |
| Allergies | ☐ | Tobacco Use | ☐ |
| Asthma | ☐ | Anemia | ☐ |
| Frequent colds/flu/sinus | ☐ | Migraines/Headaches | ☐ |
| Thyroid Problems | ☐ | Learning Disabilities | ☐ |
| Kidney Problems | ☐ | Arthritis | |
| Fatigue | ☐ | Other (specify)\ _____ | |
| Eye or vision problems | ☐ | | |
| Back Problems | ☐ | | |
| Emotional, physical, or sexual abuse | ☐ | | |

## CHILD HEALTH PROBLEMS

**[ADMINISTER TO NEW CHILD/CHILDREN]**
First name of: Child __: _____Child __: _____
Child __: _____

In the past 3 years, has your child experienced any of the following health problems?

| | C__ | C__ | C__ | | C__ | C__ | C__ |
|---|---|---|---|---|---|---|---|
| Allergies | ☐ | ☐ | ☐ | Head Lice | ☐ | ☐ | ☐ |
| Anemia | ☐ | ☐ | ☐ | Behavior Problems | ☐ | ☐ | ☐ |
| Asthma | ☐ | ☐ | ☐ | Conjunctivitis (pink eye) | ☐ | ☐ | ☐ |
| Cancer | ☐ | ☐ | ☐ | ADD/ADHD | ☐ | ☐ | ☐ |
| Chronic Pain | ☐ | ☐ | ☐ | Fetal Alcohol Effects/ | | | |
| Learning Disability | ☐ | ☐ | ☐ | Syndrome | ☐ | ☐ | ☐ |
| Depression/Anxiety | ☐ | ☐ | ☐ | Fetal Drug Effects | ☐ | ☐ | ☐ |
| Anger Management | ☐ | ☐ | ☐ | Broken Bones | ☐ | ☐ | ☐ |
| Diabetes | ☐ | ☐ | ☐ | Sexually Transmitted | | | |
| Digestive Problem | ☐ | ☐ | ☐ | Disease | ☐ | ☐ | ☐ |
| Drug Problem | ☐ | ☐ | ☐ | Skeletal Problems | ☐ | ☐ | ☐ |
| Alcohol Problem | ☐ | ☐ | ☐ | Tobacco Use | ☐ | ☐ | ☐ |
| Ear Infections | ☐ | ☐ | ☐ | Migraines/Headaches | ☐ | ☐ | ☐ |
| Eating Disorder/ | | | | Permanent Disability | ☐ | ☐ | ☐ |
| Obesity | ☐ | ☐ | ☐ | Other (specify) | | | |
| | | | | _____ | | | |
| Eye/Vision Problems | ☐ | ☐ | ☐ | _____ | | | |
| Fatigue | ☐ | ☐ | ☐ | _____ | | | |
| Frequent colds/flu/ | | | | | | | |
| sinus | ☐ | ☐ | ☐ | | | | |
| Hepatitis | ☐ | ☐ | ☐ | | | | |
| Seizure Disorders | ☐ | ☐ | ☐ | | | | |
| Skin Problems | ☐ | ☐ | ☐ | | | | |

**Short Form 36 (SF-36)**

1. In general, would you say your health is:
   - Excellent ☐
   - Very Good ☐
   - Good ☐
   - Fair ☐
   - Poor ☐

2. Compared to one year ago, how would you rate your health in general now?
   - Much better now than one year ago ☐
   - Somewhat better now than one year ago ☐
   - About the same as one year ago ☐
   - Somewhat worse now than one year ago ☐
   - Much worse than one year ago ☐

3. The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

   a. Vigorous activities (running, lifting heavy objects, participating in strenuous sports)
      - Yes, limited a lot ☐
      - Yes, limited a little ☐
      - No, not limited at all ☐

   b. Moderate activities (moving a table, pushing a vacuum cleaner, bowling)
      - Yes, limited a lot ☐
      - Yes, limited a little ☐
      - No, not limited at all ☐

   c. Lifting or carrying groceries
      - Yes, limited a lot ☐
      - Yes, limited a little ☐
      - No, not limited at all ☐

   d. Climbing several flights of stairs
      - Yes, limited a lot ☐
      - Yes, limited a little ☐
      - No, not limited at all ☐

   e. Climbing one flight of stairs
      - Yes, limited a lot ☐
      - Yes, limited a little ☐
      - No, not limited at all ☐

f. Bending, kneeling, or stooping
Yes, limited a lot □
Yes, limited a little □
No, not limited at all□

g. Walking more than a mile
Yes, limited a lot □
Yes, limited a little □
No, not limited at all□

h. Walking several blocks
Yes, limited a lot □
Yes, limited a little □
No, not limited at all□

i. Walking one block
Yes, limited a lot □
Yes, limited a little □
No, not limited at all□

j. Bathing or dressing yourself
Yes, limited a lot □
Yes, limited a little □
No, not limited at all□

4. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

a. Cut down the amount of time you spent on work or other activities. Yes □ No □

b. Accomplished less than you would like. Yes □ No □

c. Were limited in the kind of work or other activities. Yes □ No □

d. Had difficulty performing the work or other activities. Yes □ No □

5. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

a. Cut down the amount of time you spent on work or other activities. Yes □ No □

b. Accomplished less than you would like. Yes ☐ No ☐

c. Didn't do work or other activities as carefully as usual. Yes ☐ No ☐

6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

Not at all ☐
Slightly ☐
Moderately ☐
Quite a bit ☐
Extremely ☐

7. How much bodily pain have you had during the past 4 weeks?

None ☐
Very mild ☐
Mild ☐
Moderate ☐
Severe ☐
Very severe ☐

8. During the past 4 weeks, how much did pain interfere with your normal work (including both outside the home and housework)?

Not at all ☐
A little bit ☐
Moderately ☐
Quite a bit ☐
Extremely ☐

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks…

a. Did you feel full of pep?

All of the time ☐
Most of the time ☐
A good bit of the time ☐
Some of the time ☐
A little of the time ☐
None of the time ☐

b. Have you been a very nervous person?

| | |
|---|---|
| All of the time | ☐ |
| Most of the time | ☐ |
| A good bit of the time | ☐ |
| Some of the time | ☐ |
| A little of the time | ☐ |
| None of the time | ☐ |

c. Have you felt so down in the dumps that nothing could cheer you up?

| | |
|---|---|
| All of the time | ☐ |
| Most of the time | ☐ |
| A good bit of the time | ☐ |
| Some of the time | ☐ |
| A little of the time | ☐ |
| None of the time | ☐ |

d. Have you felt calm and peaceful?

| | |
|---|---|
| All of the time | ☐ |
| Most of the time | ☐ |
| A good bit of the time | ☐ |
| Some of the time | ☐ |
| A little of the time | ☐ |
| None of the time | ☐ |

e. Did you have a lot of energy?

| | |
|---|---|
| All of the time | ☐ |
| Most of the time | ☐ |
| A good bit of the time | ☐ |
| Some of the time | ☐ |
| A little of the time | ☐ |
| None of the time | ☐ |

f. Have you felt downhearted and blue?

| | |
|---|---|
| All of the time | ☐ |
| Most of the time | ☐ |
| A good bit of the time | ☐ |
| Some of the time | ☐ |
| A little of the time | ☐ |
| None of the time | ☐ |

g. Did you feel worn out?

| | |
|---|---|
| All of the time | ☐ |
| Most of the time | ☐ |
| A good bit of the time | ☐ |
| Some of the time | ☐ |
| A little of the time | ☐ |
| None of the time | ☐ |

h. Have you been a happy person?

| | |
|---|---|
| All of the time | ☐ |
| Most of the time | ☐ |
| A good bit of the time | ☐ |
| Some of the time | ☐ |
| A little of the time | ☐ |
| None of the time | ☐ |

i. Did you feel tired?

| | |
|---|---|
| All of the time | ☐ |
| Most of the time | ☐ |
| A good bit of the time | ☐ |
| Some of the time | ☐ |
| A little of the time | ☐ |
| None of the time | ☐ |

10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

| | |
|---|---|
| All of the time | ☐ |
| Most of the time | ☐ |
| Some of the time | ☐ |
| A little of the time | ☐ |
| None of the time | ☐ |

11. How TRUE or FALSE is <u>each</u> of the following statements for you?

a. I seem to get sick a little easier than other people.
   - Definitely true ☐
   - Mostly true ☐
   - Don't know ☐
   - Mostly false ☐
   - Definitely false ☐

b. I am as healthy as anybody I know.
   - Definitely true ☐
   - Mostly true ☐
   - Don't know ☐
   - Mostly false ☐
   - Definitely false ☐

c. I expect my health to get worse.
   - Definitely true ☐
   - Mostly true ☐
   - Don't know ☐
   - Mostly false ☐
   - Definitely false ☐

d. My health is excellent.
   - Definitely true ☐
   - Mostly true ☐
   - Don't know ☐
   - Mostly false ☐
   - Definitely false ☐

For each of the following statements, check the box that best describes HOW OFTEN YOU HAVE FELT THIS WAY DURING THE PAST WEEK.

Table C. 2. Feelings About How Things Are Going

| | **Rarely or none of the time** | **A little of the time** | **A moderate amount of time** | **Most or all of the time** |
|---|---|---|---|---|
| **1. I was bothered by things that don't usually bother me** | | | | |
| **2. I did not feel like eating; my appetite was poor** | | | | |
| **3. I felt that I could not shake the blues even with help from my family and friends** | | | | |
| **4. I felt that I was just as good as other people** | | | | |
| **5. I had trouble keeping my mind on what I was doing** | | | | |
| **6. I felt depressed** | | | | |
| **7. I felt that everything I did was an effort** | | | | |
| **8. I felt hopeful about the future** | | | | |
| **9. I thought my life had been a failure** | | | | |
| **10. I felt fearful** | | | | |
| **11. My sleep was restless** | | | | |
| **12. I was happy** | | | | |
| **13. I talked less than usual** | | | | |
| **14. I felt lonely** | | | | |
| **15. People were unfriendly** | | | | |
| **16. I enjoyed life** | | | | |
| **17. I had crying spells.** | | | | |
| **18. I felt sad** | | | | |
| **19. I felt that people disliked me** | | | | |
| **20. I could not "get going"** | | | | |

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## REFERENCES


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