

ABSTRACT

Title of Thesis: STRESSOR EVENTS, RESOURCES, AND DEPRESSIVE
SYMPTOMS IN RURAL, LOW-INCOME MOTHERS

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This study, based on stress theory, sought to understand whether resources moderate the effects of stressors on depressive symptoms over time among a sample of rural, low-income mothers. Both quantitative and qualitative methods were utilized to explain the phenomena under investigation. Results revealed that higher numbers of stressors were associated with higher levels of depressive symptoms. At time one, resources were found to moderate the effects of stressors on depressive symptoms, with higher levels of resources and higher levels of stress producing the greatest level of depressive symptoms. At time two, resources did not moderate the effects of stressors on depressive symptoms. This study found that resources do not always serve a protective function. One explanation appears to be the “hidden cost” of resources revealed in the mothers’ interviews. Recommendations for future research and practical applications are discussed.

STRESSOR EVENTS, RESOURCES, AND DEPRESSIVE SYMPTOMS IN RURAL,
LOW-INCOME MOTHERS

By

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Chapter 1: Introduction

Statement of the Problem

Rural, low-income mothers often face stressor events such as unemployment and underemployment, unreliable transportation, and lack of access to affordable childcare. These stressors exacerbate the tension and strain they face living under the chronic stressor of poverty (Cochran et al., 2002). Some are able to withstand stressors, successfully adjusting to the changes that must be made in order to overcome these stressors (McCubbin et al., 1997). Others lack personal, family and/or community resources, or access to resources, that will help them effectively overcome these stressor events (Deavers & Hoppe, 1991; McKenry & Price, 2000).

Rural poverty, and especially the effects of the stress of poverty, is an often neglected area of research, with little known about those living in rural poverty compared to their urban counterparts. Commins (2004) said that "...a principal characteristic of rural poverty is its invisibility." (p. 61). Research and policy on rural populations also neglect the personal experiences of these families, paying little attention to their words and ideas (Vandergriff-Avery, 2001).

Mothers living in conditions of rural poverty face obstacles beyond that of their male counterparts (Kohler, Anderson, Oravec, & Braun, 2004; Institute for Women's Policy Research, 2001). In the United States, 33.9 million (12.4%) people are living below the poverty line; over 18 million (13%) of those living under the poverty line are women (U.S. Census Bureau, 2000). Nearly 30% of these women live in rural areas. Thus, the proportion of women living in poverty in rural areas is higher than that of the total population (Myers & Gill, 2004). Rural women have less earning power than their

male counterparts, with the result that rural women are more likely to face negative conditions associated with poverty (Institute for Women's Policy Research, 2001; Kohler et al., 2004). This vulnerable group also faces social isolation, making it difficult to access resources that will help them overcome the obstacles they face (Kohler et al., 2004). Women are twice as likely to be diagnosed with depression as men, with those suffering depression more likely to depend on welfare (Kessler et al., 1994; Kohler et al., 2004). This creates a cycle in which women have a difficult time being self-sufficient due to their depression, thereby becoming more depressed as a result of their inability to overcome the obstacles of poverty (Kohler et al., 2004). Although research has looked at poverty as a general topic and the gender differences in poverty, mental health professionals know little about the effects of rural poverty on women (Myers & Gill, 2004).

Motherhood and the parental role are characterized by a number of chronic stressors that affect one's ability to adequately rear the next generation (Glenn & McLanahan, 1982; Turner, 2006). The financial strain and isolation of rural poverty exacerbates these stressors, leaving rural, low-income mothers more likely to face a unique set of problems associated with the daily stresses of motherhood (Turner, 2006). Rural, low-income mothers face time constraints beyond those of their urban counterparts due to social isolation and lack of access to resources in their community (Ross, Mirowski, & Goldsteen, 1990). This vulnerable group often must forgo educational and employment opportunities due to a lack of adequate childcare, poor transportation, and the need constantly to be bringing in an income in order to reduce financial strain (Reschke & Walker, 2006; Ross et al., 1990; Turner, 2006). Rural, low-income mothers

must manage balancing their parental role with their employment role, which often places a burden on these mothers who are struggling to bring in an income to support their children while physically caring for them (DeMeis & Perkins, 1996; Simon, 1995).

Motherhood also plays a role in the experience of depressive symptoms, with depression most chronic or recurrent during the childbearing years (Seto, Cornelius, Goldschmidt, Morimoto, & Day, 2005). Living in conditions of poverty has been shown to amplify the stresses of motherhood, increasing the likelihood that mothers will experience depressive symptoms (Boyce et al., 1998; Coleman, Ghodsian, & Wolkind, 1986; Hall, Williams, & Greenberg, 1985). Rural, low-income mothers may be limited in their social support, recreational opportunities, and community involvement in part because of limited access to adequate childcare, increasing the likelihood of experiencing depressive symptoms (Garrison, Marks, Lawrence, & Braun, 2004; Reschke & Walker, 2006). The current research study expanded on this literature by examining individual, family, and community level factors that are associated with the experience of depressive symptoms in rural, low-income mothers.

Despite high prevalence rates, data have shown that rural, low-income mothers are less likely to seek treatment for their depressive symptoms than their urban counterparts (Simmons, Huddleston-Casas, & Berry, 2007). The stigma associated with seeking professional help often deters rural, low-income mothers from seeking services (Rost, Smith, & Taylor, 1993). Rural areas have a shortage of mental health care providers, making it difficult for women to seek services if they chose (Jameson & Blank, 2007). Research indicates that women who do not seek mental health services for depressive symptoms are likely to become chronically depressed over time (Seto et al.,

2005). The negative results of chronic depression amplify already present stressors and can create new stressor events. Research has shown that chronic depression is linked to more frequent arguments with family members and friends, relationship problems, decreased social support, and increased financial strain (Seto et al., 2005).

Much of the research on rural, low-income mothers focuses on their deficits that contribute to their hardships and stress. Often over-looked are the strength-based assets and positive aspects of their lives that help them to manage stress effectively (Harris, 1997). With a particular focus on assets, this study examined women's stories of coping with stressors and optimism in times of stress for evidence of resources.

Mothers employ various resources throughout their life course to deal with the normative and non-normative stressors they face as individuals and part of the family unit. Resources help a family prevent stressor events from occurring and diminish the impact of those that do occur in order to prevent a family crisis (McCubbin et al., 1997). McCubbin and McCubbin (1988) developed a list of what they called *protective factors* that individuals and families commonly use throughout the life cycle: accord, celebrations, communication, financial management, hardiness, health, leisure activities, personality, support network, time and routines, and traditions. These protective factors are assets that help individuals and families adjust and adapt when faced with stressors and help promote growth in individuals and the family as a unit (McKenry & Price, 2000).

Adaptation to life's stressors and crises is known in the literature as resiliency, or the ability to adapt to hardships that threaten the well-being of the family (Walsh, 2002). Research has shown that social support is a key protective factor that helps rural, low-

income mothers “bounce back” from the stresses associated with poverty (Kohler et al., 2004). Researchers must continue to look at other resources to better understand the context in which rural mothers live and how they overcome stress in order to diminish depressive symptoms. Understanding the individual processes and interactions with family, friends, and the community that enable some rural mothers to cope effectively with stressor events was the focus of this research study. Specifically, the study asked: *To what extent do resources play a moderating role in buffering rural, low-income mothers from negative effects of acute and chronic environmental stressors on their depressive symptoms?*

Purpose of the Current Study

This study addressed gaps in the research on rural, low-income mothers. The purpose of this study was to examine the relationships among stressor events, resources, and depressive symptoms in rural, low-income mothers such that mental health counselors will be better able to understand these mothers’ unique life circumstances. More specifically, this longitudinal study examined the lived experiences of a sample of rural, low-income mothers to: 1) identify stressor events; 2) identify resources utilized by the mothers to respond to stressor events that they experienced; and 3) examine the relations of levels of stressor events and resources with depressive symptoms at two points in time over approximately 12 months. The findings from the study have implications for helping policy makers and mental health clinicians become better equipped to assess stressor events and resources in at-risk populations, specifically rural, low-income mothers, and in developing policies and intervention programs to help stressed mothers cope more effectively.

Informing this study was family stress theory. Family stress theory proposes that the impact of a stressor event is moderated by the resources that members of a family employ to cope with it, as well as by their perception of the stressor event (Boss, 2002). The current study builds on the work of Boss (2002), McCubbin and McCubbin (1988), and Vandergriff-Avery (2001) in applying family stress theory to the stressor events and resources present in the lives of rural, low-income mothers.

The focus of this study was the examination of the resources utilized by rural, low-income mothers and their association with the effects of stressor events on mothers' depressive symptoms. A mixed-methods approach incorporating both quantitative and qualitative methods was used to identify incidents of presence of stressor events and resources and evidence of themes regarding perception of both and their relationship to an assessment of depressive symptoms. (Creswell & Plano Clark, 2007).

Chapter 2: Review of Literature

Rural Poverty

Poverty is a persistent problem in the United States, with more than 32 million people living in poverty in 1999 (U.S. Census, 2000). Though rural communities are considered the minority when looking solely at numbers of people populating them, rural areas currently account for 97% of land in the United States (Brown & Swanson, 2003; Isserman, Fesser, & Warren, 2007). A 10.3% population increase in rural areas from 1990 to 2000 reflects the closing gap in population growth rates between rural and urban areas (Johnson, 2003).

Often neglected in research and policy, rural poverty accounts for 41% of the poor in the United States, with nearly 15% of all rural people living below the poverty line (Commins, 2004; Dalaker & Proctor, 2000). Developed in the 1960s, the poverty line is a “federally defined income limit defined as the cost of an ‘economy’ diet for a family, multiplied by three” (Cherlin, 2006, p. 123). Pockets of rural poverty are spread across the country, accounting for 240 of the 250 poorest counties in the United States (Morrison, 2004). Rural areas have had consistently higher rates of poverty than urban areas, a gap that has been increasing over the last 20 years (Dalaker & Proctor, 2000; Jensen, McLaughlin, & Slack, 2003). According to the U.S. Census (2000) urban poverty rates are 3.1 percentage points lower than those in rural areas.

General Characteristics of Rural Poverty

The southern region of the United States has the highest rate of rural poverty, with 17.7% of those living in the south living at or below the poverty threshold in 2005 (Economic Research Services, 2007). The southern region of the United States is defined

as Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas (Summers, 1995). The composition of rural communities is diverse. In 1999, rural communities across the country were primarily composed of non-Hispanic Whites, with a poverty rate of 11.6%. Although African Americans and those of Hispanic origins are not as represented in rural areas, their rates of poverty are high – 28.5% and 25.7%, respectively. The lowest rate of rural poverty among racial/ethnic groups is that for Asian Americans, with a rate as low as 11.3% (U.S. Census, 2000).

Rural Poverty and Family Stress

All families, urban and rural, experience normative transitions, and the stressors associated with them as they move through the individual and family life cycle. Normative transitions are “... changes or transitions which are expected and predictable, which most or even all families will experience over the life cycle, and which require adjustment and adaptation” (McCubbin & Figley, 1983, p. xxi). Normative transitions lead to change in the family system, and its members adapt to individual development, gender-specific development, and family development. This development occurs through a social context, physical changes, and psychological growth (Boss, 2002; McCubbin & Figley, 1983). Examples of normative transitions include birth, marriage, and retirement (Boss, 2002).

All families, regardless of location, also experience non-normative stressors, such as the untimely death of a loved one, that they must adapt to in order to successfully cope and transition along through the life cycle (Coward & Jackson, 1983). However, families living in rural poverty deal with a number of stressors beyond those experienced by their

urban counterparts (Commins, 2004). These stressors are felt on a more continuous basis for families living in rural areas, making it harder for them to “bounce back” to their previous level of functioning (Vandergriff-Avery, Anderson, Braun, 2004).

Those living in rural areas are at an increased risk of poverty due to recent changes in the rural labor market (Cochran et al., 2002). Compared to metropolitan regions, rural areas have higher rates of unemployment and underemployment, perpetuating rural poverty. No longer able to depend on agricultural employment due to the shift in America’s rural economy, those living in rural communities now must rely on service employment, part-time work, and other non-benefit jobs (Coward & Jackson, 1983).

Unlike urban poverty, which is concentrated in particular locations, rural poverty is dispersed, with some counties being extremely isolated. This wide separation between rural areas and urban cities leaves those living in rural areas with little access to childcare, medical care, and educational advancement (Commins, 2004). In a study of 71 men and women living in poverty in rural Nebraska, North Dakota, and South Dakota, participants noted that one of the most frustrating issues they face living in a rural impoverished area is their inability to access high-quality, affordable childcare, making it extremely difficult to work (Cochran et al., 2002). People living in rural communities often lack access to available services due to their physical distance from services sites and the lack of service agencies that serve rural populations (Deavers & Hoppe, 1991). A study of a five county cluster in Missouri’s Ozarks found that four of the counties studied contained no hospitals, universities, and few manufacturing jobs. The isolation increased the amount of strain felt by the rural poor living in these counties (Morrison, 2004).

When rural, low-income individuals and families do have access to services, many choose not to use them due to the shame they feel emanating from stereotypes about welfare. Sherman (2006) conducted a study that looked at “moral” coping strategies for economic survival. The researcher interviewed 25 women and 30 men living in Golden Valley, California, an isolated, high-poverty, rural community in Northern California. This study found that participants used “means-tested” welfare options, such as cash assistance and food stamps, as a last resort before illegal options. Upon looking at this finding in depth, Sherman (2006) found that the majority of participants perceived this economic survival strategy to be of low moral capital because they felt humiliated having to rely on such means. Being on welfare was looked at as shameful, and although many admitted to having received welfare at some point in their lives, they looked to other economic survival strategies, such as family help and cheap housing, first. Those who admitted to having been on welfare discussed the ridicule associated with being on welfare and in some cases even being shunned in the community.

Rural Poverty and Depressive Symptoms

Research has suggested that the experience of poverty has dramatic effects on depressive symptoms across the life span (Amato & Zuo, 1992). Researchers have estimated that 41% of women living in rural poverty self-report significant depression (Sears et al., 1999). Findings from the *Rural Families Speak* population indicate a higher rate of depressive symptoms with 52.5% of study participants self-reporting experiencing depression (Simmons et al., 2004). The experience of poverty, the economic impact of living in poverty, and the increased incidence of mental and behavioral disorders create a

distinct cycle with increased obstacles that make it more difficult for those living in poverty to become self-sufficient (Myers & Gill, 2004). Titled “The Vicious Cycle of Poverty and Mental Disorders” (World Health Organization, 2001), this cycle describes the negative mental health results of poverty that result in the persistence of poverty.

Individuals living in rural poverty find themselves fighting against the odds to break away from the cycle and become self-sufficient. Those experiencing poverty often have low educational attainment and are often underemployed or unemployed (Myers & Gill, 2004; WHO, 2001). Research has found that women with major depression are less likely to work more than 20 hours a week and more likely to be receiving welfare (Danzinger, Kalil, & Anderson, 2000; Jayakody, Danzinger, & Pollack, 2000) and that low educational attainment and the inability to work, due to depression, have negative economic consequences that result in the persistence of poverty throughout the lifespan (Myers & Gill, 2004).

The presence of children amplifies stressor events present in the lives of rural, low-income mothers making them more likely to experience depressive symptoms and depression (Boyce et al., 1998; Coleman et al., 1986; Hall et al., 1985). In a longitudinal study of 476 child-bearing low-income mothers (Seto et al., 2005), researchers found that chronically depressed mothers had lower rates of employment, lower income, and more financial stress than those with no depressive symptoms or only one episode of depressive symptoms across the 10 year study. Mothers with chronic and severe depression also reported more arguing with their partner and family and having less social support than the group experiencing no depressive symptoms (Seto et al., 2005). Risk factors for depression in rural, low-income mothers include limited access to

resources, lower levels of social support, and inadequate means for community involvement (Garrison et al., 2004). These risk factors are heightened in rural populations due to limited access to adequate and affordable childcare options (Reschke & Walker, 2006).

Despite high rates of depression, studies have shown that rural, low-income mothers are less likely to see themselves as depressed and seek mental health care services than their urban counterparts (Rost, 1993; Simmons et al., 2007). Simmons et al. (2007) looked at a sample of 219 rural, low-income women, comparing their scores on a measure of depression symptoms to their self-report of depression. Including only respondents who scored above the moderate level of depressive symptoms on the CES-D, this study found that 52.5% of women experiencing depressive symptoms self-reported depression. Having a child within the last three years was found to be a factor in women reporting depressive symptoms, with those who recently had a child less likely to self-report depression (Simmons et al., 2007). One explanation for this finding is that rural, low-income mothers are not educated on the symptomatology of depression and associate their depressive symptoms with the experience of being a new mother (Simmons et al., 2007).

The stigma associated with having a mental health problem and seeking professional services may also deter rural, low-income mothers from seeking services (Jameson & Blank, 2007; Rost, 1993; Simmons et al., 2007). Members of rural communities have cited lack of privacy and social stigma as a barrier to receiving mental health services (Jameson & Blank, 2007). Hoyt, Conger, Valde, and Weihs (1997) found that rural communities had higher perceived stigma associated with mental health

problems than non-rural communities. This perceived stigma impacted community member's willingness to seek mental health services (Hoyt et al., 1997). High perceptions of social stigma have also been associated with low self-esteem and reduced life satisfaction, which can heighten the symptoms of those who are already experiencing depression (Perlick et al., 2001).

Children are also affected by poor maternal mental health, with research showing maternal depression having a negative impact on children's physical, socioemotional, and academic well-being across all socioeconomic classes (Lennon, Blome, & English, 2001; McLoyd, 1990). Mothers exhibiting depressive symptoms are less likely to engage in supportive parenting practices that promote positive behaviors that will increase the likelihood of breaking the cycle of poverty, such as academic success (Murry et al., 2002). These consequences are frequent and often magnified in rural, low-income populations (Kohler et al., 2004; Lennon et al., 2001). The consequences of maternal depression on children may affect the children's ability to overcome their economic circumstances and break away from the cycle of poverty (Kohler et al., 2004). Thus, understanding the nuances of rural mental health and poverty seems critical.

Resiliency

Family Resiliency

Family resiliency is a family's ability to positively adapt to stressful events and hardships that threaten the well-being of individuals within the family and the unit as a whole (Walsh, 2002). Past approaches tended to view families in terms of the deficits within the family that increase their struggle as they face adverse situations (Walsh, 2003; Walsh, 2002; Wolin & Wolin, 1993). Wolin and Wolin (1993) looked at how

dysfunctional families contribute to family members' risk but neglected looking for family processes that contribute to resiliency. This deficit approach viewed the family as the cause of risk factors and stressor events and unlikely to foster resiliency. These approaches, such as those used by Wolin and Wolin (1993), look at families as damaged and without the capacity to handle chronic and sporadic stressor events.

Walsh (2002) explains that deficit-focused approaches looked at families in terms of “normality, psychopathology, and health” (p. 131). Such approaches tended to view one specific family form, two-parent household with a breadwinner father and homemaker mother, as essential for healthy development, which stigmatized those who did not fit the mold and labeled them as “abnormal”. The concepts of “health” and “abnormality” have been socially constructed based on assumptions rather than fact (Coontz, 1997). In truth, healthy families that function well can be found in a variety of forms just as those who do not function well vary in form and composition. The alternative approach is to look at what factors and resources allow different family forms to develop and function positively from their strengths (Walsh, 2002).

A family resiliency framework is a strength-based approach that looks at how families successfully manage stressors and crises (Walsh, 2002; Walsh, 2003). Family resilience should be viewed as a process through which stressor events are moderated by resources to allow positive outcomes (Patterson, 2002). This framework focuses on how families adapt in the wake of these stressors and hardships and grow stronger as a result of that change (Walsh, 2002). Rather than focusing on pathology, a family resiliency framework focuses on enhancing family functioning and promoting well-being (Walsh, 2002; Walsh, 2003; Luthar, Cicchetti, & Becker, 2000).

Research has shown that when faced with similar adverse situations, some families are more capable of positively rebounding from adversity than others. McCubbin et al. (1997) explored the question of why some families endure in the face of hardships whereas others struggle to adapt. These differences can be attributed to a complex interplay of individual and family traits that develop over time at home and in the larger societal context (Cohler, 1987; McCubbin et al., 1997). Personal traits serve to protect the entire family through the promotion of well-being. An example of an individual trait that promotes adaptation and reduces strain is hopefulness (Vandergriff-Avery, 2001). Families, as a group, may also develop various coping strategies to face adversity, making them more resilient than those with less successful coping mechanisms (Walsh, 2002). An example of a characteristic that families employ in the face of adversity is the promotion of communication among members (Vandergriff-Avery, 2001). External resources in the larger social context also serve to protect the family. Access to social service agencies and a support network provides the family with resources that could not be obtained within the family system and can help to reduce strain.

Grounded in systems theory, a family resilience framework looks at families not only as single units but in the broader social context as well. Individual and family responses are evaluated in terms of their interaction within the family and society (McCubbin et al., 1997). Systems theory proposes that the world is composed of subsystems that cannot be fully understood independent of one another (Spruill, Kenney, & Kaplan, 2001). The ecological model, developed by Urie Bronfenbrenner (1979), uses a system approach to examine how a person develops in the context of his or her relationships and society. In this model, the individual is imbedded in four system levels

that impact and interact with one another (Klein & White, 1996). The microsystem, the innermost circle of this model, is composed of individuals in families and their immediate setting. The mesosystem, the next ring in the ecological model, provides linkages to settings outside the family's immediate environment but with which they have continuous contact, such as family, childcare, and schools. The exosystem looks at the community context in which families function such as work settings and religious communities. Finally, the macrosystem, the outermost ring, involves larger societal factors that impact family life but are not experienced in the immediate environment, such as poverty and culture (Bronfenbrenner, 1979; Klein & White, 1996; Maring & Braun, 2006). A fifth system, the chronosystem, situates the person within time and over time. This subsystem is particularly helpful when time can impact individual and family life (Marghi & Braun, 2004). An ecological approach allows researchers to look at risk and resiliency factors within each subsystem to better understand how individuals and families are impacted by their context (Maring & Braun, 2006).

A resiliency framework also uses a developmental perspective to look at how families cope and adapt over time to both normative and non-normative stressors. These stressors, especially those that are chronic, can affect individual and family development as members move through the life course (Walsh, 2002). Individuals face normative developmental transitions throughout the life cycle while the family system moves through its own developmental transitions (Carter & McGoldrick, 1988). According to Erikson (1968), the way an individual manages stress and overcomes developmental tasks in one stage of the life-cycle affects their ability to successfully handle the tasks associated with later stages. The individual and family system must adapt as members

move through the development stages; a rippling effect can occur when individuals adapt poorly, with all members being affected (Walsh, 2002). Poverty, the topic of the current study, can begin at any point in the individual and family life-cycle, with its consequences lasting in subsequent stages (Myers & Gill, 2004). A family resilience framework looks at the processes that families go through as they adapt to individual and family developmental transitions (McCubbin, McCubbin, McCubbin, & Futrell, 1998; McCubbin, McCubbin, Thompson, & Fromer, 1998). McCubbin and McCubbin (1988) looked at how particular protective factors play an important role at various stages as families adapt in different stages of the family life cycle.

Resources. A family resiliency framework incorporates family resources to explain why some families are better suited than others to cope with stressors and crises. Resources, or protective factors as defined by McCubbin et al. (1997), are those that shape a family's ability to carry on in the face of risk factors and stressor events. Combinations of protective factors unique to each family support adjustment to stressors, and promote growth as a result of that adjustment (McCubbin & McCubbin, 1988; Walsh, 2002). *Adjustment* involves using protective factors in order to maintain healthy functioning and proper development when facing stressors (McCubbin et al., 1997). Protective factors also serve the function of preventing crises from occurring as a result of stressor events (McCubbin & McCubbin, 1988; McCubbin et al., 1997).

McCubbin and colleagues based their work on protective factors on a national study of 1,000 families (Olson et al., 1983) and a national study of 360 families (McCubbin, Thompson, Pirner, & McCubbin, 1988). Through these studies they identified eleven protective factors employed by families throughout the stages of the

family life cycle, such as coupling, childbearing, families with school aged children, families with teens and young adults, empty nest, and retirement stage. Some protective factors may be utilized more than others during certain stages whereas other protective factors may be utilized throughout the family life cycle (McCubbin & McCubbin, 1988).

“Accord,” the first protective factor described by McCubbin and McCubbin (1988), refers to the “balanced interrelationship among family members that allows them to resolve conflict and reduce chronic strain” (p. 248). The “celebrations” protective factor refers to the family coming together to recognize individual members of the family and/or religious events. “Communication” is how family members exchange information and caring through the sharing of beliefs and emotions. “Financial management,” the fourth protective factor identified by McCubbin and McCubbin (1988), is the family’s ability to make sound money management decisions and financial planning skills. As a protective factor, financial management also refers to the family’s satisfaction with their financial situation that contributes to the family’s sense of well-being. “Hardiness,” as a protective factor, is defined as “a basic strength through which families find the capacity to cope (p. 248)”. Hardiness “emphasizes family members’ sense of control over their lives, commitment to the family, confidence that the family will survive no matter what, and the ability to grow, learn and challenge each other” (p. 248). “Health” as a family protective factor is extremely important due to its relation to stress. Robust physical and mental health in the face of stress experienced by the family helps to create a more positive home atmosphere, creating an environment of reduced stress and strain. “Leisure activities” refers to the ways that family members enjoy spending time together. Leisure activities can be shared passive, social, or personal interests. Acceptance of preferences

for leisure activities is related to the eighth protective factor, “personality” (1998). Personality “involves acceptance of a partner’s traits, behaviors, general outlook and dependability” (p. 248). This factor can affect interpersonal relationships and how members relate to one another (McCubbin & McCubbin, 1998).

Markstrom, Marshall, and Tryon (2000) proposed that having a “support network”, the ninth factor found by McCubbin and McCubbin (1998), is a protective factor that increases the likelihood an individual will engage in problem-solving skills in order to reduce chronic strain. Support networks are the positive aspects of relationships with in-laws, relatives, and friends that help reduce chronic strain and promote family well-being. Cooke, Rossmann, McCubbin, and Patterson (1988) interviewed twenty-two expectant and first time parents to better understand the types of social support individuals find helpful during times of high stress. The results of the study identified five types of social support that were thought to be particularly helpful: emotional, esteem, network, appraisal, and altruistic support (Cooke et al., 1988).

The tenth protective factor used to promote family resilience is “times and routines.” This factor includes aspects of members’ daily lives that promote stability in the family. The final protective factor, “traditions,” refers to honoring special occasions and holidays that have been carried through the generations of the family (McCubbin & McCubbin, 1988).

McCubbin further categorizes protective factors into a dyadic grouping based on the characteristics of each factor — instrumental and expressive resources. Individuals and families use instrumental and expressive resources to protect against deterioration as a result of stressful life events (McCubbin & McCubbin, 1988). Instrumental resources,

or support, are those which provide help in the form of labor, time, or direct help (Cooke et al., 1988; Wills, Blechman, & McNamara, 1996). Expressive resources are those based on interpersonal and intrapersonal characteristics within a family. They are emotional and psychological in nature and help the individual and system feel cared for and able to handle stressor events that come their way (Cooke et al., 1988; McCubbin & McCubbin, 1988; Wills, Blechman, & McNamara, 1996). This classification allows researchers and practitioners to better understand the ways each resource, or protective factor, affects the system (McCubbin & McCubbin, 1988).

Theoretical Perspective

The theory underlying this study is family stress theory, developed by Rueben Hill in the 1950s (Boss, 2002; Hill, 1958). Hill (1958) developed a linear model that described the factors affecting the degree of stress felt by the family. His framework looked at three independent or intervening variables:

A – the provoking event or stressor

B – the family's resources or strengths at the time of the event

C – the meaning attached to the event by the family (individually or collectively)

Each of the above factors affects the degree of disequilibrium or disruption in functioning felt by the family, or the "X" in Hill's model. The degree of disequilibrium ranges from low to high levels, with the highest levels resulting in family crisis (Boss, 2002; Hill, 1958).

This theory has served as a guide for research on families and stress, which has expanded the associated knowledge base. Boss (2002) adapted Hill's model to make it less linear by focusing on how context influences the degree of stress felt by an

individual or family. A context approach allows for examination of the external context over which an individual or family has limited or no control, such as poverty, especially poverty of place such as exists in many rural areas. By taking context into account, this adapted model permits a resilience framework that considers how personal, familial, and environmental factors contribute to overcoming stress.

Boss (2002) also cautions that social construction of stressors must be taken into account. Boss (2002) notes the importance of taking culture and context into account when looking at family stress. For example, racism and discrimination may play a role in the experience of stress for some families more than others (Boss, 2002). Certain individuals and family forms, such as individuals of color and same sex-couples, are often faced with hostile environments filled with prejudices and intolerance and internal perceptions of less worth as a result of living in a hostile environment. This chronic stressor can influence individual and family perceptions of all other stressors (Boss, 2002).

Family stress theory uses a systems approach in order to look at the family unit and its interactions with the broader social context. A systems approach helps researchers and practitioners better understand why a person responds to a stressor in a particular way when alone and differently when in the context of the family. When an event is deemed stressful by one member of the family its effects can be seen in other individual members of the family who must respond or react to that stress (Boss, 2002). By using a systems approach to stressor events we can better understand how a family's reactions are influenced by the current state of the world, their cultural identification, the economic

conditions of society and the family, as well as the family's current point of development in the family life cycle (McKenry & Price, 2000).

The ABC-X Model of Family Crisis, shown in Figure 1, states that a stressor event interacting with family resources and the family's perception of that event determines the degree of stress associated with the event (Hill, 1958; McKenry & Price, 2000). Stressors are defined as "discrete life events or transitions affecting the family unit that produce, or have the potential to produce, change in the family social system" (Lavee, McCubbin, & Olson, 1987, pp. 858-859). Family stress causes disturbances in family stability that, unless successfully resolved, can leave the family at a lower level of functioning (Boss, 2002). Family stress, compared to individual stress, involves the degree to which the stress associated with an event may cause change within the family system (e.g., the structure of the family or the manner in which the members interact with each other), rather than the individual. Stressors may involve disturbances in the individual family members, in relationships among family members, or in the larger societal context over which the family has no control. How a family manages these disturbances affects the impact on the system (Boss, 2002). Stresses can come as normative life transitions as family members move through the life course, such as the birth of a child, or non-normative stressors, such as unexpected transportation problems or loss of a job. Family stress theory hypothesizes that no matter what the source of the stressor – normative or non-normative, the family members' perceptions of their well-being are affected (Lavee et al., 1987).

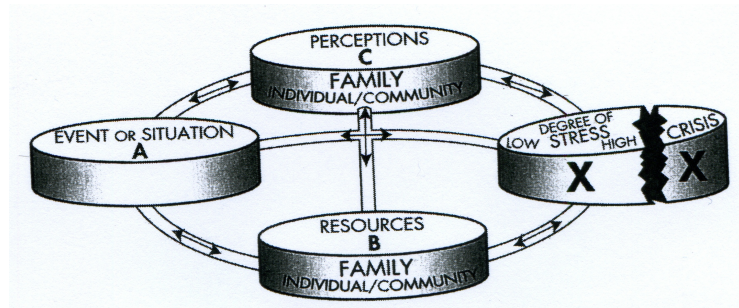


Figure 1. Boss adaptation of Hill's ABC-X model

As shown in Figure 2, this study adapted Hill and Boss' models by looking at the interaction of stressor events and resources to understand depressive symptoms, rather than degree of stress. The adapted model also begins at point "C", perception of the event, rather than point "A", the stressor event. Mothers were interviewed and asked questions about their lives and their family. Because only mothers were asked to discuss questions pertaining to their entire family and their community, the entire interview is based on perception. The model utilizes mothers' perceptions regarding particular events and resources to determine the presence of perceived stressor events and resources. Finally, the model in this study also places these perceptions in the context of rural poverty.

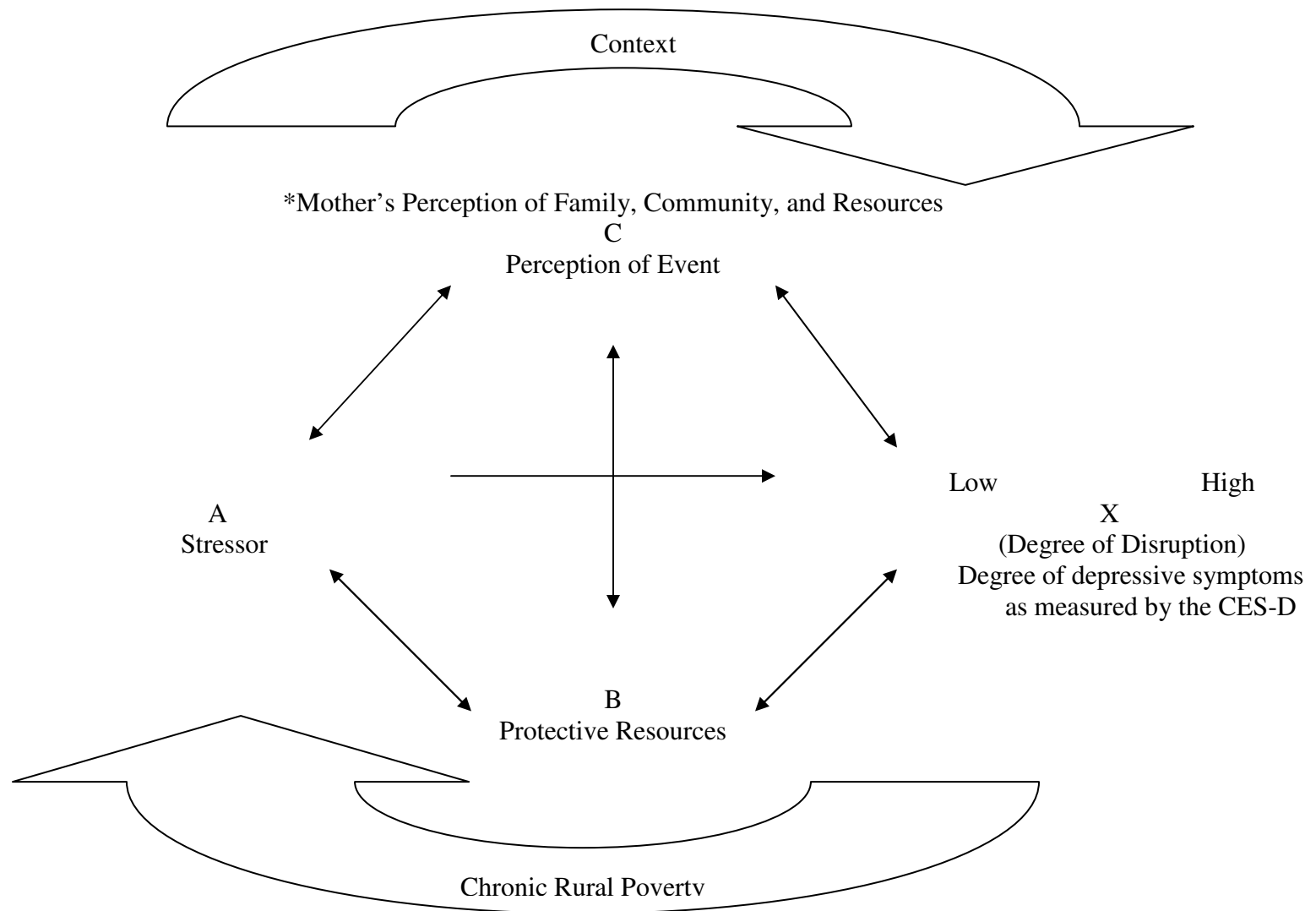


Figure 2. Waldman's adapted ABC-X model

Stressors, the “A” factor in the ABC-X model, can occur as single events or as multiple events that may happen to a family over an extended period of time. Isolated stressors are single disturbances that are not associated with any other stressors, leaving the family with time to cope and readjust their system. Cumulative stressors are those that pile up, giving the family little time to manage each stressor and adjust the system. When families have little time to cope with cumulative stressors they often become worn down as a result of all the unresolved stressors (Boss, 2002). In a study of 1,251 families, Lavee et al. (1987) found that having a “pile up” of stressor events creates role strain and negative familial interactions, which in turn influences perceived well-being.

The impact of stressor events is moderated by the family’s ability to utilize adequate resources, the “B” factor in the ABC-X model. This model proposes that resources are strengths, which serve as assets for the family (Hill, 1958). McKenry and Price (2000) used the word “buffer” to describe the moderating role of family resources on the impact of stressor events. Buffers act as protection, decreasing the likelihood that a family will feel the negative effects of a stressor event (Cowan, Cowan, & Schultz, 1996). Resources are defined as “traits, characteristics, or abilities of (a) individual family members, (b) the family system, and (c) the community that can be used to meet the demands of a stressor events” (McCubbin & Patterson, 1982, pp. 26). Individual resources used by family members include health, level of education, and job security. Family resources are internal characteristics used by the family system to overcome stressor events. Research has shown that families who have moderate levels of adaptability and family cohesion (bonds) are more adept in handling stressor events. Adaptation involves change for an extended period of time that becomes part of family

life (Boss, 2002; Lavee et al., 1987; McKenry & Price, 2000). Community resources are those outside of the family system, such as social support, that they can look to in times of stress (McKenry & Price, 2000).

The “C” factor in the ABC-X model is the family’s perception of the event. How a family perceives and defines a stressor event plays a moderating role on the impact of the event. Families can perceive a stressor as a positive event or challenge that can promote growth and positive change or negatively, feeling as though there is no hope for successful adaptation. When a family reframes stressor events in terms of positive features they are more likely to successfully overcome the stressor (McKenry & Price, 2000). Folkman and Lazarus (1980) looked at appraisal in the coping process. Appraisal refers to how a person assesses a stressor event in terms of its meaning. In a study of 100 community-residing men and women ages 45 to 64, Lazarus and Folkman found that how an event was appraised turned out to be the most “potent” factor accounting for coping variability (Lazarus & Folkman, 1980). Emotion-focused appraisal occurs when a person sees little chance for beneficial change. On the other hand, when a stressor is appraised through a problem-solving lens, an individual sees the possibility for change and takes action to ameliorate negative tension (Lazarus & Folkman, 1980; Lazarus & Launier, 1978). Thus, how a situation is cognitively appraised determines how an individual copes (Lazarus & Folkman, 1980).

Interacting with a family’s resources and perceptions of a stressor event is their ability to engage in coping actions (McKenry & Price, 2000). Lazarus and Folkman (1984) define coping as “all efforts expended to manage a stressor regardless of the effect.” Coping strategies are individual and family internal reactions and behavioral

responses used to deal with stressors. The family may modify their strategies, reactions, and responses over time and in relation to the degree of the stressor event that is experienced (McKenry & Price, 2000). Effective coping strategies should move individuals and families to more positive levels of functioning, helping to reorganize the family so they can deal with future stressors (Boss, 2002).

A family's resources to manage stressor events and their perception of the event play a role in the degree of stress and compromised functioning felt by the family, or the "X" factor. While stressor events cause an imbalance, or altered state of family functioning, they can be overcome through adaptation (McKenry & Price, 2000). Stress is a continuous variable with varying degrees depending on the stressor event and the family's ability to cope through the use of resources and positive perceptions (Boss, 2002).

When a family perceives a high degree of stress in an event and does not have the adequate resources to cope with that event, a crisis may develop. This development occurs as a result of inadequate resources and negative perceptions of the event (McKenry & Price, 2000). Unlike stress, which can vary in degree, crisis is a categorical variable with families either being in crisis or not (Boss, 2002). Crises involve a major disturbance in family equilibrium and inhibit adequate family functioning. As a family enters into a state of disequilibrium, they become immobilized, unable to perform at an optimal level. Boundaries are lost and roles become blurred as individual members struggle to maintain physical and psychological functioning (Boss, 2002; McKenzie & Price, 2000). Crises can be temporary and may even leave the family functioning at a higher level than before their experience of the crisis (McKenry & Price, 2000).

Variables

Independent Variable

The independent variable in this study is stressor events. Stressor events (“A”) are those that produce tension, strain, pressure, and/or imbalance within the family. Some examples of stressor events include parenting hardships/worries, housing problems, and community concerns. Community concerns are issues regarding feelings of belonging, acceptance, safety, and security (Vandergriff-Avery, 2001).

Moderating Variable

A moderating variable in this study is resources employed by the mothers and their families to reduce the strain associated with stressor events and focuses on the interplay of resources (“B”) to handle stressors and the mother’s perceptions of the stressors (“C”). Resources are perceptions, assets, and/or actions used by any family member in attempts to combat or prevent the tension, strain, pressure, and/or imbalance associated with a stressor event. Resources include, but are not limited to, the presence of a support network, education, and financial management (McCubbin & McCubbin, 1989; Vandergriff-Avery, 2001).

Dependent Variable

The dependent variable is depressive symptoms as measured by the Center for the Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977). Depressive symptoms are comprised of six dimensions reflecting depression: depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbances (Radloff, 1977).

Research Questions

Prior research has shown that stressor events are risk factors associated with the presence of individuals' symptoms of depression. Prior findings also indicate that a variety of personal, social and community resources can serve a protective function, moderating negative impacts of stressor events on aspects of individuals' well-being such as depression. To increase knowledge about the associations of stressors and resources with depressive symptoms among a sample of rural, low-income mothers, this study sought answers to these research questions:

1. To what extent do the mothers in this sample exhibit depressive symptoms?
2. Are there significant relationships between demographic characteristics of the mothers, such as marital status, education, number of children, annual income, and race/ethnicity, and presence of depressive symptoms?
3. What types of stressor events and resources does this sample of mothers, all living under the chronic stressor of poverty, report to be present in their lives?
4. What types of stressors and resources were reported most frequently within the sample?
5. Is the degree of stressor events experienced by the mothers associated with depressive symptoms?
6. Is the number of resources employed by the mothers associated with depressive symptoms?

7. Does the presence of resources moderate the relation between stressor events and depressive symptoms?
8. Do resources at time one moderate the relation between stressor events at that time and subsequent change in depressive symptoms at time two, one year later?

Hypotheses

Based on a review of the literature concerning rural poverty, motherhood, depression, family stress theory, and resources, the following hypotheses were generated to answer the research questions regarding rural, low-income mothers:

1. A higher number of stressor events will be associated with a higher level of mothers' depressive symptoms.
2. A higher number of resources will be associated with a lower level of mothers' depressive symptoms.
3. Resources will moderate the relation between stressor events and mothers' depressive symptoms, such that when the level of resources is higher the association between degree of stressors and degree of depressive symptoms will be weaker than when the level of resources is lower.
4. Stressor events at time one will be associated with a change in depressive symptoms at time two, one year later, such that a higher number of stressor events at time one will be associated with an increase in depressive symptoms at time two.

5. Resources at time one will be associated with a change in depressive symptoms at time two, one year later, such that a higher number of resources at time one will be associated with a decrease in depressive symptoms at time two.
6. Resources at time one will moderate the relation between stressor events at time one and a change in mothers' depressive symptoms at time two, one year later, such that when the level of resources at time one is higher the association between degree of stressors at time one and degree of change in depressive symptoms will be weaker than when the level of resources is lower.

Chapter 3: Methodology

Population

This study used quantitative and qualitative data to conduct a secondary analysis of data collected by researchers in a longitudinal, multi-state research project NC-223/NC-1011 *Rural Low-income Families: Tracking Their Well-being and Functioning in the Context of Welfare Reform* also known as *Rural Families Speak*¹. The national investigation focused on 413 mothers living in 24 counties in 13 states between 2000 and 2003 (Bauer, 2004).

Counties were selected based on the rural-urban continuum codes developed by Butler and Beale (1994) of the United States Department of Agriculture (USDA) Economic Research Service. The continuum, which ranges from zero to nine, classifies counties on the basis of population and location (e.g., adjacent to a metropolitan area). Counties receiving a zero rating have a population of one million or more and are in metropolitan areas. Counties receiving a code of nine are completely rural or have an urban population of less than 2,500 and are not adjacent to a metropolitan area (Butler & Beale, 1994). The minimum code to be included in the national study was a six – an urban population of 2,500 to 19,999 adjacent to a metropolitan area.

To be included in the national project, states had to recruit at least twenty participants, and to be included in the study, participants had to be a mother at least 18

¹ Support for this research was provided by the Agricultural Experiment Stations and Cooperative Extension in the cooperating states, and Ohio University; Maryland Department of Human Resources; U.S. Department of Agriculture NRI Grants--(2001-35401-10215; 2002-35401-11591; and 2004-35401-14938); and the American Association of Family and Consumer Sciences. Cooperating states were: California, Colorado, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New York, Ohio, and Oregon.

years of age, have at least one child living in their home age 12 or younger, and be eligible for Food Stamps and/or WIC (Women, Infants, and Children's Supplemental Nutrition Program). The family structure used to define the study population places all mothers in the "childbearing" and "school-aged" stages of the family life cycle (Carter & McGoldrick, 1988; McCubbin & McCubbin, 1988).

Maryland Sample

Dorchester and Garrett counties in Maryland were chosen to be included in the *Rural Families Speak* study based on their codes on the Butler and Beale (1994) rural-urban code continuum. Dorchester County is coded as seven on the continuum, with a population of 2,500 to 19,999 that is not adjacent to a metropolitan area. Garrett County is coded an eight on the continuum, meaning that it is completely rural or has a population of less than 2,500 and is adjacent to a metropolitan area. In 1998, when counties were being chosen for participation, the per capita personal income for Dorchester County was \$20,766 and the per capita income for Garrett County was \$18,293 (Maryland Department of Planning, 2000).

In the state of Maryland, study participants were recruited with the help of Maryland Cooperative Extension Educators. Participants were recruited at social service and education sites through fliers, posters, and face to face contact (see Appendix A & B). Both the flier and the poster gave a brief description of the project and the incentive for participating: a \$25 gift card to Wal-Mart and a children's book for each child. The recruitment flyer explained that participants would be asked questions about their community, the services available to them and their family, the challenges of working and living, their family, what is hard for their family, and what they would like to see

changed. The flyer also explained that they would be interviewed multiple times over a number of years and that interviews would be strictly confidential, informing participants that their participation would not affect their benefits from the state of Maryland. The flyer also informed the reader that the interviews would be taped so that the research team could have their words. The poster briefly explained that participants would spend two hours answering questions about their life, their family and informed them of who they should see to obtain more information.

Interviews in both Dorchester and Garrett County were conducted by Maryland's principal investigator, who served as advisor for this thesis, and a research team of faculty and doctoral graduate students from the University of Maryland's Department of Family Science. Interviews, which followed a standardized protocol, were taped and then transcribed verbatim. Time two interviews were conducted approximately 12 months after time one.

Study sample. In the original study, a total of 34 mothers were interviewed in Maryland. For this study, mothers who had all necessary data in time one were included, resulting in a sample size of 31. Time one participants provided data on demographic characteristics, the association between demographics and depressive symptom scores, and hypotheses one through three. Due to dropout of 4 mothers over the 12 month period between time one and time two, a sample of 27 was available to examine the moderating effect of resources at time one on stressor events at time one and the change in depressive symptom scores from time one to time two. The test for statistical differences between the initial sample and the final sample could not be conducted due to the small number of

those who dropped out. The study was approved by the University of Maryland—College Park Institutional Review Board under IRB #08-0133.

Procedures

This study built on an exploratory investigation of stressor events and protective factors among the Maryland mothers in the *Rural Families Speak* conducted by Vandergriff-Avery (2001). A research team of undergraduate and graduate students, under the direction of the Maryland research team director, pilot-tested the coding scheme originally developed by McCubbin (1988). This pilot test addressed the instrumentation and methodology. Modifications to the coding scheme, which emerged through analysis of all interviews, were made based on the research team's findings and recommendations. An example of a modification is the inclusion of *transportation* as a resource. This modification, and others, became apparent as the coding team read through the first wave of interviews (see Table 1). The McCubbin model focused on relationship or personal attributes as potential protective factors and did not include such tangible resources as a dependable car. Modifications were also made in the form of more explicit definitions of resources and stressor events. An example of this type of modification is the expansion of the definition of "parental love and care" to include measures taken, or hoped for, regarding children's present and future happiness.

Table 1
Modifications to McCubbin's Classification and Definitions

ProtectiveResource/Factor	McCubbin	Vandergriff-Avery	Maryland Team
Accord	X	X	X
Celebration	X	X (other ²)	X (other ²)
Communication	X	X	X
Financial Management	X	X	X
Hardiness	X	X	X
Health	X	X (other ²)	X (other ²)
Leisure Activities	X	X (other ²)	X (other ²)
Personality	X		
Support Network	X	X	X
Time and Routines	X	X	X
Traditions	X	X (other ²)	X (other ²)
Husband/Partner Helps with Parenting		X	X
Parental Love/Care		X	X
Faith/Religion		X	X
Protection of Family/Children		X	X
Family Pride		X	X
Avoidance		X	X
Parental Strengths/Confidence		X	X
Family Teachings/Values		X	X
Community Resources		X	X
Community Quality of Life		X	X
Education			X
Hopefulness			X
Housing			X
Transportation			X
Other		X	X

Each interview with a mother was coded by a team of one undergraduate student and the author of this thesis. Each member of the team read the interviews individually and then met together to validate their findings. After pilot testing two interviews, team

² Celebration, leisure activity, health, and tradition were coded under "Other" in the modified coding scheme created by Vandergriff-Avery and further modified by the researcher for this thesis. The resources previously mentioned were chosen to be coded under "Other" as a result of their limited frequency.

members met to discuss differences in coding. Team members looked at each category and discussed the items each found in their qualitative analysis. Items that differed between team members were further discussed until the team negotiated an agreement as to whether or not the item should be included in this study. The team analyzed the reliability of their coding by looking at the number of items that were consistent between team member's codes prior to negotiation. Findings were considered reliable if over 75% of the initial codes were consistent such that the team members applied the same code to the same segment of an interview. After the pilot test, teams that found reliability in their coding then used the above description of validation and negotiation to analyze an entire year of interviews.

Measurement

To answer the guiding research questions and hypotheses of this study, a mixed-methods analysis of data was used. By converging both quantitative and qualitative data, a more complete understanding was possible than by a single type of data analysis. Demographic and personal characteristics were measured to further describe the sample. Demographics characteristics were also examined to understand the association between demographic characteristics and depressive symptoms.

Independent and moderating variables. The independent variable, stressor events, and moderating variable, resources, were measured by qualitative coding of the interviews based on the classification shown in Table 2. Stressor events were defined as: *Mention of any event, occurrence, or situation that produces negative tension, strain, pressure, and/or imbalance within the family and does not meet the criteria associated with a family crisis* (Vandergriff-Avery, 2001). Resources were defined as: *Mention of*

any perception, resource, and/or action used by any family member to combat or prevent the tension, strain, pressure, and/or imbalance associated with a stressor event

(Vandergriff-Avery, 2001). For this study, 16 stressor events and 21 resource categories were used. A complete set of definitions of each coded category is available in Appendix C.

Table 2
Categories of Stressor Events and Resources

Stressor Events (n= 16)	Resources (n=21)
Parenting Hardships/Worries	Accord
Single Parenthood	Communication
Relationship Problems	Hardiness
Interactions	Support Network
Financial Problems	Time & Routines
Health Related Problems	Husband/Partner Helps with Parenting
Housing Problems	Parental Love/Care
Transportation Problems	Faith/Religion
Jobs/Employment Related Problems	Protection of Family/Children
Non-Parental Childcare Problems	Family Pride
Religious Concerns	Avoidance
Legal Issues	Parental Strengths/Confidence
Availability and/or Access to Community Resources	Financial Management
Community Concerns	Family Teachings/Values
Time	Community Resources
Other	Community quality of life
	Education
	Hopefulness
	Housing
	Transportation
	Other

The number of mothers who discussed each variable and the number of times they mentioned each variable was calculated through counts of each of the stressor events and resources. The total frequency of stressor events and resources mentioned by all mothers and the mean number of times each stressor event and resource was mentioned was calculated.

In addition to identification of stressor events and resources, qualitative analysis of interviews provided evidence of the mothers' perceptions of the impact of stressor events and of the presence or use of resources. Stressor events and resources that were mentioned by participants a mean number of 1.50 times or more were further examined to understand their impact on rural, low-income mothers. This number was determined by looking at the mean number of times each stressor event and resource was mentioned. Because stressor events and resources mentioned by participants a mean number of 1.0 times or slightly higher may have been an artifact of the interview protocol, those that were, on average, mentioned 1.50 times or more were further examined on the basis that the mothers descriptions of these stressor event and resource were not just a result of the interview protocol. Quotes were selected based on the congruence and diversity of responses to illustrate the lived experiences of the mothers.

Dependent variable. Depressive symptoms were assessed using the Centers for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977). The CES-D is a 20-question measure that assesses degrees to which an individual has experienced each of a number of depressive symptoms in a 7-day period. The CES-D uses a four-point Likert scale (0-3), with the scoring of positive items reversed (see Appendix D). Possible scores range from zero to 60 (Radloff, 1977). A person who scores 16 or higher on the CES-D is

considered to be displaying depressive symptoms. Higher scores on the individual items and on the measure as a whole indicate more depressive symptoms (Radloff, 1977). As is commonly the case in research and clinical practice, CES-D scores of mothers in the present study were assessed as a continuous variable, as degrees of depressive symptoms.

Chapter 4: Results

Overview

A mixed methods analysis was conducted to explore the association between stressor events, resources, and depressive symptoms among rural, low-income mothers. Research question one, which asked about the extent to which mothers display depressive symptoms, was assessed by determining the sample's mean depressive symptom score. Bivariate correlations and one-way analyses of variance were used to answer research question two which asked about significant relationships between demographic characteristics of the mothers and the presence of depressive symptoms.

Multiple regression analyses were used to test the hypotheses and related research questions of this study. The first analysis examined time one depressive symptoms scores as a function of number of stressors and number of resources reported by the mothers as well as the interaction of stressors and resources. Research question five and hypothesis one, regarding a positive association between stressors and depressive symptoms, was tested by the main effect for stressors as a predictor of depressive symptoms. Research question six and hypothesis two, regarding a negative association between resources and depressive symptoms, was tested by the main effect for resources as a predictor of depressive symptoms. Research question five and hypothesis three, regarding resources as a moderator of the stressor-depression relationship, was tested with the stressor-by-resources interaction term (the product of each participant's total stressors score and her total resources score) as a predictor of depressive symptoms. The three predictor variables were entered into a stepwise model, allowing an examination of their relative contributions in accounting for variance in CES-D scores.

The second multiple regression analysis examined depressive symptom change scores (time two CES-D score minus time one CES-D score) as a function of the number of stressors and the number of resources reported by the mothers during time one, as well as the interaction of stressors and resources at time one. Hypothesis four, regarding a positive association between stressors at time one and an increase in depressive symptoms at time two, was tested by the main effect for stressors as a predictor of change in depressive symptoms. Hypothesis five, regarding an association between resources at time one and a decrease in depressive symptoms at time two, was tested by the main effect for resources as a predictor of change in depressive symptoms. Research question eight and hypothesis six, regarding resources as a moderator of the stressor-depressive symptom relationship, was tested with the stressor-by-resources interaction (the product of each participant's total stressor score and total resources score) as a predictor of change in depressive symptoms. The three predictor variables were again entered using a stepwise model, allowing an examination of their relative contributions in accounting for variance in change in CES-D scores.

Qualitative analyses were also conducted to understand what stressor events and resources were most common amongst the sample. Qualitative coding of the interviews was conducted to answer research question three, which asked what types of stressor events and protective resources were reported by the mothers. Research question four, which asked which stressors and resources were reported most frequently, was examined by looking at the number of times each stressor and resource was mentioned. The stressors and resources that were mentioned, on average, 1.50 times or more were further examined to understand the mothers' experiences through their own words. An ecological

analysis of stressor events and resources was also conducted to understand the system level and context associated with each stressor event and resource.

Quantitative Results

Demographics

Table 3 provides descriptive statistics (frequencies and/or means) regarding characteristics of the participants in time one. As previously stated, the sample is composed solely of women. In terms of race and ethnicity, the sample consists of non-Hispanic Whites (55%), African Americans (32%), Native Americans (10%), and multi-racial (3%) participants. Participants had a mean age of 28, with participants' ages ranging from 18 to 45. The majority of the participants were living with a partner (66%) and had an average of 2.2 children at the time of the initial interview. The mean annual income of participants' families was \$12,727, with 66% of participants employed at the time of the interview. The majority of participants (52%) had not graduated from high school before having their first child, with 71% of participants eventually earning at least their high school diploma or GED.

Research question one asked: *To what extent do the mothers in this sample exhibit depressive symptoms?* The sample's mean depressive symptoms score in time one was 17.00. This population displayed mild depressive symptoms with the mean CES-D being slightly above 15.00, the highest CES-D an individual can get and still be considered as not displaying depressive symptoms. The range of CES-D scores was 3 to 53, and the standard deviation was 12.65.

Table 3
Demographic and Personal Characteristics at Time One

Demographic Characteristic	Study Sample (n = 31)
Mean Age	28.2
Marital Status (frequencies)	
Single, divorced, separated (no partner in household)	12
Partnered (married or living together)	19
Education (frequencies)	
8 th grade or less	0
Some high school	9
High school degree or GED	7
Business or technical training	7
Some college, including AA	7
College or university degree	1
Study beyond BA/BS degree	0
Ethnicity (frequencies)	
Non-Hispanic White	17
Latino	0
Native American	3
African American	10
Asian	0
Multi-racial	1
Mean number of children	2.2
Mean Annual Income	\$12,727
Employment Status (frequencies)	
Employed	19
Unemployed	12
Personal Characteristics	
Mean CES-D³ Score	17.00 (SD = 12.65)

Associations between Demographic Characteristics and Depression Scores

Research question two asked: *Are there significant relationships between demographic characteristics of the mothers, such as marital status, education, ethnicity, number of children, annual income, and race/ethnicity, and presence of depressive*

³ Center for Epidemiological Studies Depression Scale

symptoms? A series of bivariate correlations and one-way analyses of variance were conducted to answer this research question. Bivariate correlations were used to assess the association between CES-D scores and continuous demographic characteristics (participant's age at the time of interview, number of children, total annual income). Pearson *r* analyses were conducted and are presented in Table 4. No significant correlations emerged among these variables and depression.

Table 4
Correlations among Depressive Symptoms and Demographic Characteristics (n = 31)

Demographic Variable	Pearson Correlation (<i>r</i>)	Significance (<i>p</i>)	Degrees of Freedom (<i>df</i>)
Participants age at time of interview	.15	.41	30
Number of children	.09	.62	30
Total annual income	-.10	.60	30

The associations between categorical demographic characteristics (marital status, race/ethnicity, education level, and employment status) and depressive symptoms were assessed through one-way ANOVAs and are presented in Table 5. Marital status, education level, race/ethnicity, and employment status (see Table 3 for levels of variables) were not significantly related to depressive symptoms.

Table 5
One-way ANOVA Scores Among Depressive Symptom Scores and Demographic Characteristics (n = 31)

Demographic Variable	<i>F</i>	Significance (<i>p</i>)	Degrees of Freedom (<i>df</i>)
Marital status (partnered vs. unpartnered)	.31	.87	(4, 26)
Employment status (employed vs. unemployed)	4.02	.06	(1, 29)
Race/Ethnicity	1.67	.21	(3, 27)
Education level	1.08	.39	(4, 26)

Tests of the Hypotheses

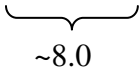
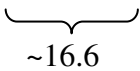
Multiple regression analyses were used to test the hypotheses of this study. The first analysis examined time one stressor events, resources, and depressive symptoms scores. Research question five asked: *Is the degree of stressor events experienced by the mothers associated with depressive symptoms?* Hypothesis one predicted: *A higher number of stressor events will be associated with a higher level of mother's depressive symptoms.* Research question six asked: *Is the number of resources employed by the mothers associated with depressive symptoms?* Hypothesis two predicted: *A higher number of resources will be associated with a lower level of mothers' depressive symptoms.* Research question seven asked: *Does the presence of resources moderate the relation between stressor events and depressive symptoms?* Hypothesis three predicted the direction of this interaction: *Resources will moderate the relation between stressor events and mothers' depressive symptoms, such that when the level of resources is higher the association between degree of stressors and degree of depressive symptoms will be weaker than when the level of resources is lower.* A stepwise model was used in order to examine the three predictor variables relative contributions in accounting for CES-D scores.

At step one, total stressor scores entered the analysis as a significant predictor of CES-D scores, $F(1, 29) = 6.80, p = .014$, with a multiple correlation of .44 and a R^2 of .19. At step two, the stressor-by-resources interaction entered the equation, accounting for an increase of 11.8% in CES-D variance, with the change in R^2 being significant, $F(1, 28) = 4.77, p = .038$. The main effect for resources did not account for additional variance in depressive symptoms, and the total model including stressors and the

stressors-by-resources interaction as predictors had a R of .56, $R^2 = .31$, $F(2, 28) = 6.22$, $p = .006$. The β for total stressors was 1.15, supporting hypothesis regarding a positive association between level of stressors and level of depressive symptoms, and the β for the stressors-by-resources interaction was -.79.

In order to examine the pattern of the stressors-by-resources interaction in determining depressive symptom level, the continuous variables of total stressors and total resources were dichotomized by means of median splits for their distributions. The median split for total stressors scores resulted in scores of 15 and below being categorized as lower stressors (coded as 1) and scores of 16 and above categorized as higher stressors (coded as 2). The median split for total resources scores resulted in scores of 29 and below being categorized as lower resources (coded as 1) and scores of 30 and above categorized as higher resources (coded as 2). Subsequently, a 2 X 2 table of means was computed for the four combinations of the levels of stressors and resources, representing the stressors-by-resources interaction, and those means are presented in Table 6.

Table 6
Cell Means for the Stressors by Resources Interactions for Depression Scores

	Total Stressors Low		Total Stressors High
Total Resources Low	12.22		20.14
Total Resources High	9.57		26.13

The combination of a low number of stressors and a high number of resources produced the lowest levels of depressive symptoms with a mean of 9.57. The pattern, shown in Table 6, moves in a clockwise direction with the highest mean, 26.13, occurring within the combination of a high number of stressors and a high number of resources. Table 6 shows that the greatest level of depression scores in this sample occurred when both stressors and resources were high. Hypothesis three, which predicted that resources would moderate the negative effects of stressors on depressive symptoms, was partially supported. While step two of the regression analysis yielded significant results, they were in the opposite direction of what was predicted, with the highest levels of depression occurring when levels of both stressor events and resources were high. The second multiple regression analysis examined depressive symptom change scores (time two CES-D score minus time one CES-D score) as a function of the number of stressors and the number of resources reported by the mothers during time one. This analysis was run on a sample of 27 out of the 31 original interviews, as a result of participant dropout during the 12 month period between time one and time two. Hypothesis four predicted: *Stressor events at time one will be associated with a change in depressive symptoms at time two, one year later, such that a higher number of stressor events at time one will be associated with an increase in depressive symptoms at time two.* Hypothesis five predicted: *Resources at time one will be associated with a change in depressive symptoms at time two, one year later, such that a higher number of resources at time one will be associated with a decrease in depressive symptoms at time two.* The second multiple regression analysis also examined the interaction of stressors and resources at time one and their association to depressive symptom change scores. Research question

eight asked: *Do resources at time one moderate the relation between stressor events at that time and subsequent changes in depressive symptoms at time two, one year later?*

Hypothesis six predicted: *Resources at time one will moderate the relation between stressor events at time one and a change in mothers' depressive symptoms at time two, one year later, such that when the level of resources at time one is higher the association between degree of stressors at time one and degree of change in depressive symptoms will be weaker than when the level of resources is lower.*

The results of the multiple regression analysis indicated that none of the three predictors accounted for significant variance in depression change scores, with none of them entering the stepwise equation. Stressors at time one were not a significant predictor of change in depression symptoms, $p = .71$. Resources at time two were also not a significant predictor of change in depressive symptoms, $p = .65$. The interaction of stressor events and resources was not significantly associated with change in depressive symptoms, $p = .63$. When the three predictors were entered simultaneously, $R = .10$, $R^2 = .01$, $F(3, 23) = .08$, $p = .97$.

Regression analyses of the change in depression scores shows that there are no significant relationships between stressor events or resources at time one and change in depressive symptoms from time one to time two. There is also no significant interaction between resources and depressive symptoms on the change in depression symptoms from time one to time two, as predicted by hypothesis six. These results were contrary to hypotheses four, five, and six regarding the effects of resources and stressors events on change in depressive symptoms.

Qualitative Results

Research question three asked: *What types of stressor events and resources does this sample of mothers, all living under the chronic stressor of poverty, report to be present in their lives?* Through qualitative coding of time one interviews, it was found that all 16 stressor events and 21 resources examined by the coding scheme were employed by at least one of the mothers in this study. In addition to identification of stressor events and resources, qualitative analysis of interviews provided evidence of the mothers' perceptions of the impact of stressor events and of the presence or use of resources. Instrumental and expressive resources were employed to help the mothers and their families move through their daily lives.

Research question four asked: *What types of stressors and resources were reported most frequently within the sample?* This question was answered by looking at the average number of times each stressor event and resource was mentioned. Table 7 and Table 8 demonstrate the results of this analysis.

Table 7

Measure of Central Tendency for Frequency Counts of Stressor Events

Variable	Mean # of Times Mentioned	Median	Mode	Range	Total Number of Responses
Parenting Hardships/Worries	2.29	2.00	2	0-9	71
Financial Problems	2.19	2.00	1	0-10	68
Availability and/or Access to Community Resources	1.90	2.00	1	0-5	59
Health Related Problems	1.81	1.00	1	0-6	56
Interactions	1.71	1.00	1	0-6	53
Job/Employment Related Concerns	1.06	1.00	1	0-3	33
Single Parenthood	1.06	1.00	0	0-5	33
Community Concerns	.97	1.00	1	0-3	30
Housing Problems	.97	1.00	0	0-4	30
Non-parental Childcare Problems	.94	.00	0	0-5	20
Other	.87	1.00	0	0-3	27
Relationship Problems	.61	.00	0	0-4	19
Transportation Problems	.55	.00	0	0-2	17
Time	.39	.00	0	0-2	12
Legal Issues	.29	.00	0	0-4	9
Religious Concerns	.03	.00	0	0-1	1

Table 8
Measure of Central Tendency for Frequency Counts of Resources

Variable	Mean # of Times Mentioned	Median	Mode	Range	Total Number of Responses
Support Network	5.26	5.00	4	1-12	163
Availability and/or Access to Community Resources	3.81	4.00	4	1-6	118
Other	3.00	30.00	2	0-6	93
Protection of Family & Children	2.58	2.00	3	0-8	80
Husband/Partner Helps with Parenting	1.81	2.00	2	0-5	56
Education	1.52	1.00	1	0-5	47
Parental Love/Care	1.39	1.00	0	0-5	43
Community Quality of Life	1.32	1.00	1	0-3	41
Family Pride	1.32	1.00	1	0-4	41
Transportation	1.19	1.00	1	0-3	37
Accord	1.19	1.00	1	0-4	37
Communication	1.16	1.00	1	0-3	36
Financial Management	1.06	1.00	1	0-4	33
Times & Routines	1.00	1.00	1	0-1	31
Housing	.87	1.00	1	0-3	27
Parental Strengths/Confidence	.74	1.00	0	0-4	23
Faith/Religion	.65	.00	0	0-11	20
Hopefulness	.61	1.00	1	0-2	19
Family Teachings and Values	.58	.00	1	0-4	33
Hardiness	.39	.00	0	0-2	12
Avoidance	.26	.00	0	0-3	8

Stressor events and resources that were mentioned, on average, 1.50 or more times in each interview were further examined. Although the “other” resource was mentioned, on average, 3.00 times in each interview, it was not included in this further examination due to the wide variety of resources included in this construct. A total of five stressor events and five resources were used for a more in-depth analysis. Quotes chosen

for qualitative analysis were selected based on the congruence and diversity of responses to illustrate the lived experiences of the mothers.

Stressor Events

This sample of rural, low-income mothers experienced various stressor events that interacted with their depressive symptoms, evidenced by statistical analysis looking at the association between stressor events and depressive symptoms measured by the CES-D. The five stressor events that occurred most frequently in the lives of the mothers in this study are discussed further here. All names were changed to protect the participants.

Parenting hardships and worries. The most frequent stressor event found in this sample, parenting hardships and worries, refers to the strain and pressure felt by mothers due to a lack of energy or patience, sibling rivalry, discipline, and other difficulties associated with raising children. One trend that was common in this population was the mothers' concern for their children's future. Mindy in Garrett County discussed all the questions from the interview associated with her worry about her children's future:

(The thing that worries me most is) their future. What's going to happen to them? Are they going to finish school? You know, will they have a job? Will they have a place to live? I worry about myself but I know I can take care of myself.

Allana, the mother of a 1 year old in Dorchester County, also spoke to her concerns for her son's future given the state of society today:

I'm worrying about my son, when he grows up in the future, what direction he's going to take. I mean, it's a lot of things going on with the world, and kids is killing other kids in school, and I have a lot to worry about in the future, with him. Just not really knowing what he is going to do or what choices he is going to

make. That's the main thing I am really concerned about...I mean, you know, people are bombing places, people killing each other and fools getting access to a handgun.

A number of mothers found that their children had a difficult time adjusting to having a new baby in the house. Glynnis, who had a 5 year old son and was pregnant at the time of the interview, spoke to her worries about her son's reaction to having a new baby in the house:

I mean, he's used to being mommy's baby for five years. And then he already has a brother and his dad's having another one in November and I'm going to have one in December. He says 'I can't stand all these kids' and they're not even here yet. So I'm just worried about how Reggie's going to react...

With a four year old and a one year old, Charity had concerns about her son adjusting to having a new sister and their relationship:

Having another baby was a difficult thing. Troy was the center of my attention and then to have to share that attention with a crying baby is not a good thing. I have to watch him because he would just go up and twist her little foot...now they just pick on each other. He teases her.

Another trend found in this sample was a lack of patience and/or energy to deal with daily parenting issues. Idette, who not only took care of her son Shaun but also her younger sister Kyan, talked about this:

[The hardest part of being a parent is] I think patience and energy. Sometimes I don't always have the energy to run around and the patience. It's hard because I have to have the patience to deal with both of them...because she

[Kyan] needs to learn how to dress herself, tie her shoes. Like I have to work with him [Shaun] holding a spoon and it's hard because they want to do it their way. Patience is the biggest thing. I think it is the hardest thing because it's hard to be patient all the time...

When asked what the hardest thing about being a parent is LaDonna gave a similar answer: "Patience. Sometimes, it's hard to keep your cool. It really is. Sometimes it just seems that they know what buttons to push, and they just want to see how far they can push you."

While many mothers experienced similar stressors related to parenting, others experienced stressors that were unique to their children. Nan, who recently got out of an abusive relationship, worried that her son has anger problems as a result of witnessing the abuse:

Well he told [his therapist] that when he saved me that he wishes that I would have got a knife and killed his father. He never told me, but it sends chills up my spine. I just don't know what goes through this child's head and I don't want him to grow up, not like his father...but to get the anger out him that's in there. I just can't help him until he does. I feel sort of hopeless.

Nan faced a number of unique parenting worries as a result of her abusive relationship. Another mother, Twila, discussed the unique stressors she faced as a foster parent:

The biggest challenge I guess comes 'long as with our foster care. It's a little different than with most families. If they don't get to visit with their parents or something they get really upset. And that sets them back...we've seen an

occasional temper tantrum here and there and stuff like that. And that upsets the whole family. If we have one child out, in crisis or out of control, that sets the whole family.

Raising foster children presented Twila with a unique set of challenges as she navigated normative parental stressors and the added stressors faced by foster children.

Financial problems. With consistently higher rates of poverty, mothers living in rural areas often face a number of stressors not present in the lives of their urban counterparts (Dalaker & Proctor, 2000; Jensen, McLaughlin, & Stack, 2003). The ability to make ends meet was a common stressor mentioned throughout this study. Several mothers spoke about their inability to ever feel like they are on top of things financially. Allana spoke about not having enough money to pay all her bills:

I know you won't be able to meet your needs where there's everything to be paid, so you always have a bill. But I just want to be in the middle, lately I am just under. I'm just making it, and I am not even at the carpet level. I just want to make, you know, the right amount of money. Not too much, just so I can make a little bit to meet my needs.

Rene also had a difficult time keeping her family financially stable: "Well, if I could get ahead a little bit. I mean it's just, it seems like every time I get ahead something comes and knocks me back down."

Many mothers also discussed the difficulties they had paying for various bills. Shonda in Dorchester County talked about all the bills she has to pay that make it difficult for her and her family:

And it's hard for us, knowing that we have all these other bills. Cause our rent is four hundred dollars a month, on top of our furniture bill and the water bill...electric and cable and phone and you know, all sorts of things. And you know, pampers for the baby, all those things. I need the help from social services.

When asked what the biggest challenge for her family as a whole is, Sally, a mother of one in Garrett County responded: "Money. Money is really hard. Trying to pay all the bills and the credit card bills coming in, and diapers and clothes. Everything is so expensive. A paycheck will only go so far. So it hasn't been easy." Keri described how one stressor can lead to another, causing a pileup effect. She discussed the financial strain that was caused by the lack of doctors and medical centers in Garrett County, "I'm gonna have to be travelin' to Cumberland and with one income and the price of gas, the way it is right now, I mean you almost need a bank loan to get gas." Idette, described her desire to go back to school to further her career and build a better life for herself, however, the financial cost was too much:

I was going to take class in psychology, but they wanted a hundred dollars. And it was a course. And it was like three credits a course, but the whole psychology thing was like nineteen credits. And that was a lot of money.

Many mothers living in rural poverty have low educational attainment, making them less likely to obtain jobs that will help them become financially stable (Myers & Gill, 2004). Some mothers, like Idette quoted above, discussed that even when they wanted to expand their knowledge and education in order to gain the skills needed to obtain better jobs, they often lacked the financial means to do so.

Availability and/or accessibility to community resources. This stressor, which encompasses government and/or community assistance and access to stores, services, and recreational activities, was a common problem for rural, low-income mothers. One trend in this study was the lack of support many of these mothers experienced when seeking help from social services. Abiona in Dorchester County described how difficult it is to receive help from the county:

The way they have it here, it's very hard to get into the programs here. It's not really a fair place to live at all. Let's just say if I had a problem with a bill, like an electric bill and you know they have those programs or something. You would almost have to come up and say you're half dead for them to help you. You can't say, well I'm working or I fell behind and just need a little help because it's not like that. You have to be either half dead or on the streets to get into programs here. And that's my biggest thing, that I work and when I feel like I need a little help, its not there.

Shonda also expressed the difficulties she faced when seeking help and how unfair she thinks social services is:

I've had food stamps, but I'm not getting them now. And I've had medical insurance and things like that. The little bit of money they give you...it barely pays the rent...and then there are other bills on top of rent. I went in for TCA and they ask all these questions and make it so hard...It's so easy for a person like me to go in there and have a hard time to get any type of help whatsoever, and another person that you can tell is like a crackhead, and you know somebody that's on drugs...and they give them everything.

Many of the mothers in this study were not aware of the services they could be receiving. Abiona expressed anger about not knowing about all the services she could be receiving: “They don’t offer it to you. If you don’t know anything about it, you don’t walk in there and ask for it, they’re not going to tell it.”

Sherman (2006) discussed the stigma rural, low-income mothers often feel is attached to receiving social services, which keeps them from receiving the services they need. Keri, who was diagnosed with bi-polar disorder, talked about feeling judged when she tried to receive disability:

I’ve been trying to get disability benefits and the state won’t give me disability which I think is a part of welfare reform. You know they probably, I think for the most part, higher ups think that I’m just lazy or trying to take advantage of the system somehow.

Another trend, found in Garrett County, was lack of access to stores and recreational opportunities. Mothers living in rural poverty often feel an increased strain and pressure due to physical isolation from larger towns and cities (Morrison, 2004). Rural towns lack a variety of stores and medical centers. People living in these communities often must travel to get daily necessities and medical assistance (Commins, 2004). Lacking service sites for adults and recreational opportunities for children and teenagers, rural isolation increases stress as these families search for other outlets or travel to get the services they need (Deavers & Hoppe, 1991). Twila spoke to these issues:

We don’t have enough large stores. It’s one of the disadvantages. We have to go out of our area to do any major shopping or anything. And another complaint we

have is no recreational things for kids like real close...we don't have any outlets for them except for school activities.

When asked what the worst part about living in their community, a number of mothers responded that access was a problem for them. Twila responded "store-wise, it's hard to find anything around here" and Rhona said "there's no real place to buy clothes around here. You have to go to Kaiser or Cumberland". Others said the worst thing about their community was lack of things for kids to do, like Johna Kay who said "there's not much for the kids. There's no like Y or a place they can go and hang out and do things".

Health related problems. Many of the mothers in this study described various health problems their family faced that created other stressors and pressure in the family. Riane discussed how her medical problems had an effect on her education:

I've had afterbirth left in me. I've had a four centimeter cyst on my ovary leaking down into my stomach. I'm good some days and some days I just don't feel good at all. Last year, I couldn't finish school 'cause I was in and out of the hospital.

Chandra also experienced a number of added stressors due to her daughter's health problems: "Well, Ramia's [health problems] really affects our life because with her asthma, and that's from September to February, makes it hectic. I can't hold a job because I've got to be in the hospital with her." In another account, Rene described her son's health: "My oldest son [Gabriel] was just diagnosed with epilepsy, seizures, and stuff so on top of his asthma we've been having a rough time for the past two months."

Sonja, whose son Hunter also has epilepsy, described the many challenges they face as a result of her son's medical problems:

One of the hardest things, my oldest son has epilepsy and he also has some learning disabilities...it's like some of the lobes are damaged like his vision. The occipital lobe is damaged. He just has a hard time with school...I think that's a big challenge right now.

Sonja went on to discuss how the stress of Hunter's health problems has resulted in financial stress for her family:

[When our son was sick] he had to have like so much hospital bills before the state would help him. And then there was like a balance, like a thousand dollars, which we had to pay before they would kick in.

This quote again demonstrates the “pile-up” effect that occurs for many rural, low-income mothers. When stressors begin to pile-up it makes it much more difficult for them to manage each individual stressor and adjust accordingly (Boss, 2002; Lavee et al., 1987). Sonja not only had to deal with her son's medical problems but also the bills from his treatment, making it more difficult to successfully adapt to each individual stressor.

Negative interactions. Experiencing negative interactions with family, friends, co-workers, and social services agencies was a common trend among the mothers in this study. These interactions made things more difficult for them and their families. When asked if anyone was making things harder for her, Claire replied her mother: “Cause she don't really like Otis (her partner). She tells me to leave him and stuff. And it just makes it harder.” Rene described not wanting to go to her family for advice: “I just try to go to someone else (other) than my family because it's hard. You know, your family is more apt to judge you than other people.” When asked the same question, Thelma responded her mother-in-law:

She has her attitudes and her moments where she doesn't want to be bothered. So she's not dependable. But I don't want to keep my daughter from her grandmother but at the point where her being irresponsible is jeopardizing my daughter's safety.

Another common trend was negative interactions with social service workers and agencies. Abiona, in Dorchester County, reported feeling that "they act like I'm asking them to go into their personal bank account. I hate it." Charity tried to get her son into Head Start but found it to be more difficult than she had imagined: "The situation at Head Start was not good. I felt like I was discriminated against. The woman was just not kind. And she has avoided me. So that was not a good situation. I am still upset over it." LaDonna also discussed having a difficult time when talking to a woman at social services: "It's like they don't care about you or your family. They just care about their rules".

Resources

A number of resources were found to be prominent amongst the rural, low-income mothers in this study. While the association of protective factors and depressive symptoms was not found to be significant, the mothers in this study did employ a variety of resources to help them manage their daily lives.

Support network. Having a support network was an instrumental resource employed by every mother in the study. Defined by Cooke et al. (1988) as "instrumental support", these mothers expressed that having a support network often meant having someone to give them a ride, watch their children, loan them money, and/or donate time to help them with things around the house. The support network helps to reduce chronic

strain by providing assistance and facilitating more effective, skill-based thinking (Markstrom, Marshall, & Tyron, 2000) and increases the likelihood that an individual will engage in problem solving skills, Nan described how her mother has helped her: “Well at Christmas my mom sort of helps out a bit, every Christmas. It’s like fifty to a hundred dollars, she tries to help me out with clothes and stuff for the kids.” Riane talked about how helpful her family and her community was after she had her son:

They just stuck behind me....[my son’s grandmother] bought me a stroller. Some of her friends, when I first had him, brought me boxes and boxes of clothes and bibs...I had three strollers, four car seats, two, um, two carriers, about four or five cribs, two bassinets.

Thelma said she never had to worry because her family was always there: “But I have a lot of family support. My parents and my brothers and sisters, they’ll send me whatever I need, if I need anything.” Cleo, in Garrett County summed up the support she got from her mom: “mom has been our social services.”

For other mothers, having a support network meant having someone to talk to and give them advice. Cooke et al. (1988) defined this form of support as “informational support”. Chilali said her boss was one of the most important people in her life:

Because she is always there. If I had any question or concerns about anything. I would ask her. She would tell me the good and the bad, because you don’t try to lead nobody in the wrong direction. But if you take this direction, this is what will happen. A lot of advice dealing with my son and stuff like that. She’s very helpful.

Mindy also received advice from her boss: “Um, like my boss and her daughter, they talk to me a lot [about raising my kids] and give me lots of ideas and stuff.”

Leanne looked to her church for advice:

The people in my church, especially the pastor and his wife, are very helpful. I can’t talk to them. They have kids. They go through all of those same things...They can give you a good, objective opinion about things to do.

Availability and/or accessibility to community resources. Much of the support the mothers in study received was in the form of government assistance. Though mothers varied in the types of benefits they received there were some benefits that were common amongst the majority of mothers: WIC, food stamps, school free or reduced lunch, earned income credit, and purchase of care or childcare subsidy. Also, many of their children attend or had attended Head Start. Idette in Dorchester County talked about how helpful food stamps are:

It just gets so expensive, so we applied for food stamps. That helped out a lot. It does because you know when we don’t have money in our pocket we can still go to the store and get what we need for breakfast in the morning or dinner at night.

Allana found that community agencies were very helpful after she had her baby: “I attended this Support Center. They gave me much support, and, um, they helped me get a job at the post office.” Other mothers reported positive experiences with social services workers, with a few mothers reporting that the people they met were “kind” and “helpful”. A number of mothers in Garrett County reported positive experiences with Community Action, the community support center in the county. Charity talked about the help she received from Community Action when she was on maternity leave without pay:

“I came home one day and the electric had been turned off. I did go to Community Action and they did help me get it turned back on.” A number of others talked about using Garrett Transit Service (GTS) through Community Action if they needed a ride. Johna Kay discussed her positive experiences using them: “The Community Action has transportation, Garrett Transit, and, you know, you can call them and they’re pretty reliable. They’re usually there when you need them and everything else.” Participants who did have reliable transportation also mentioned (GTS) as a back up if they ever needed transportation.

Protection of family and/or children. The mothers in this study employed a variety of tactics to protect the mental, physical, and emotional well-being of their family, and specifically their children. A number of mothers spoke to protecting their children from unsafe neighborhoods and environments. When asked why she moved recently, Claire, the mother of a newborn at the time of the interview, spoke to the need for a safe neighborhood for her son: “Well, [I moved] because the street that we were living on was bad and I didn’t want my son being around it.” While Abinah, the mother of a little girl, took measures to make sure her daughter was safe at childcare:

Usually I don’t let her go over to my aunt’s house because she has a lot of children, and her children they like keep bothering with my daughter...and they have her so she likes to holler and cry. So I really don’t like taking her over there.

Another trend that was found throughout the interviews was mothers spending quality time with children in order to build a strong relationship. Shonda spoke to spending time with her oldest daughter Mayra: “We have days where we just spend time with my oldest

daughter so she won't feel left out, because the baby gets so much attention." Shonda later went out to talk about the importance of the whole family spending time together:

But we try...spending time with the whole family, all of us together, at least two or three times a week. If not, maybe, we make sure it's at least once a week if we can't do it twice or three times. We don't want to, you know the whole family to I guess split apart, or do different things or whatever. We want to stay in tight with each other.

Allana wanted to make sure she spent time with her son, Taurean, despite her busy work schedule:

Then after I get there [home], I just try to give all my devoted attention to him, by parenting and acting with him and playing with him and let him know that I'm, uh, as comfortable with me...I devote most of my time after work to my son to teach him other things. So I just take the time and devote most of my time to him.

Like many other mothers interviewed for this study, Allana also did things to help advance Taureen's education: "Well, I try to teach him and I try to teach him the colors and the shapes." Allana thought it was important to start teaching him these things at a young age so he would enjoy learning. Fiona, the mother of two grade-schoolers, also thought it was important to work with her children to advance their education: "When it's time to do homework I take one, he [her husband] takes the other. If one don't have homework we try to brush up on other skills they're having trouble with." Fiona later went on to discuss other things she and her husband do to make sure their children are fed:

And sometimes me and my husband would not eat lunch to make sure that the kids had lunch to eat on the weekends you know. A lot of times we would just eat two meals a day... You know sometimes we've done that. We had to quite a many times to make sure the kids had food to eat.

The mothers in this study employed a wide variety of tactics to make sure that their family was taken care of. They often had to give of themselves but many made sure their family came first.

Husband/partner helps with parenting. Many of the women in this study talked about how helpful their partners were in providing parenting support. A number of the single mothers in this study were receiving financial support from their children's biological fathers. Others were receiving parenting support from a new partner. Sameera talked about how her new partner, Declan, took in her daughter: "[He does] everything. He acts just like she's his. He treats her like she's his." Many of the mothers talked about how helpful their partner was and the instrumental things their partner did for and with their children. For example, Abiona spoke about what a great father her husband was:

He's past perfect. He's father of the year. He's mother of the year. He's one in a million I have to truly say. He dusts, he cooks, he cleans. He loves kids... If I'm not there, if I just don't feel like doing it, it's done. He helps a lot.

Discipline. He knows when, what, where. If they're doing something wrong in school, he's right there if he's off, or he can get off or he can go.

The most common trend found was that much of the help the mothers received with parenting was related to taking their children out and spending time with them.

Johna Kay really appreciated the time her husband, Arman, spent with his stepchildren:

“He does a lot with the boys....he takes them for rides and does things with them. And teaches them things. And he’ll take them out in the woods. He does a lot with them.”

Riane also discussed the things her husband, Darnell, does with her son: “...he always plays with him, reads to him, or gets him flash cards and they be on the floor playing with flash cards.” Many mothers reported help in the form of picking up children to and from school or taking them to different appointments and to friend’s houses. Sonja’s husband, Sean, did just that: “He picks the older ones up from practice. He goes to the games because I don’t want to go to the games...so he does the little things like that.” LaDonna found the time her partner, Conrad, spent with her children was helpful because it allowed her time to herself: “He’ll take the oldest one out and do things with him, like give me a break. Or he’ll watch the girls and let me go out with a girlfriend or something.” By giving LaDonna time to herself, her partner was allowing her time to manage the stress and strain she felt trying managing her job and her family.

Education. Taking classes to further their education and skills was an important resource for many of the mothers in this study. Many were taking classes and studying to pass their GED with the hope that a high school diploma would create better job opportunities. Others were taking skill building classes for things such as parenting, job skills, and driving through local social service agencies. Shonda found herself taking full advantage of all the Support Center had to offer: “I’m working on my GED. They have computer skills classes here. I do a lot of things here.” Claire and her husband took childcare classes to help show the courts they were prepared to take care of their children: “Well, we started taking the parenting classes before, you know, we went to court the last time. And we’ve got two more to finish and then we get a certificate saying we finish it.”

Sonja took parenting classes as well so that she could understand her children's developmental needs:

"It was a childcare class. It taught information like how the brain works and that the sections of age where kids are most able to learn and if you don't stimulate it, it dies off. They lose it completely. And just general things like the precautions and, you know, some ideas to keep the kids interested 'cause their attention span's so short.

Thelma also expressed how helpful she found parenting classes to be:

I think that the best thing that my husband and I did was took a parenting class...it was unbelievable because we learned, I mean a lot of stuff that they talked about was common sense. Stuff that I had already knew. But it was some things that we just did not know. And it was like, oh yea, and then a lot of culture stuff came out, you know, a lot of misconceptions.

Thelma later went on to talk about her desire to go to college and what she has done to help get her there:

Well, right now, I'm planning on going to Salisbury to finish up my BA in human service, but I've had training courses in youth development so I have certificate in youth development for training, if I'm not mistaken, forty-eight hours. I have two forty-eight in different trainings.

Allana was also doing things now in order to get her college degree in the future:

For one thing, I want to go back to school to complete my degree. I've done too much hard work to loose them to years that I already have. So after I was looking for another job where I can get back in that field because when you

are in that field they can pay for your tuition to go back to school...But, if I don't get a job that's paying me to go to school or whatever, I wouldn't mind doing it on the side.

Education was an important resource for the women in this study. As described by the women above, it helped them better understand their children and decrease some of the stress associated with parenting and obtain better jobs that would in turn decrease some of the financial pressure felt by the family.

Ecological Analysis

An ecological analysis of stressor events and resources was conducted in order to better understand where those identified during the study fit in the microsystem (individual and immediate family), mesosystem (extended family and friends with regular contact) and exosystems (community) in which rural, low-income mothers and their families. The macrosystem was not included in the analysis due to the entire interview taking place within the macrosystem of rural poverty. This analysis was conducted based on time one interviews and was conducted using the mothers' lived experiences expressed by their words. The researcher then placed each stressor and resource in the appropriate system level. Table 9 illustrates the results of this analysis.

Table 9
Ecological Model Analysis of Stressor Events & Resources

	Microsystem	Mesosystem	Exosystem
Stressor Events			
Parenting Hardships/Worries	X	X	
Financial Problems	X		
Availability and/or Access to Community Resources			X
Health Related Problems	X		
Interactions	X	X	X
Jobs/Employment Related Concerns			X
Single Parenthood	X		
Community Concerns	X	X	
Housing Problems	X		
Non-parental Childcare Problems	X	X	
Other	X	X	X
Relationship Problems	X		
Transportation Problems	X		
Time	X		
Legal Issues		X	X
Religious Concerns			X
Resources			
Support Network	X	X	
Availability and/or Access to Community Resources			X
Protection of Family & Children	X	X	
Husband/Partner Helps with Parenting	X		
Education	X		X
Community Quality of Life	X	X	
Transportation	X		
Financial Management	X		
Times & Routines	X		
Housing	X		
Avoidance	X		
Parental Love/Care	X		
Family Pride	X		
Accord	X		
Communication	X	X	
Parental Strengths/Confidence	X		
Faith/Religion			X
Hopefulness	X		
Family Teachings/Values	X		
Hardiness	X		
Other	X	X	X

Stressor events and resources were found in each level of the ecological model, with some stressor events and resources taking place in more than one level. The majority of stressor events and resources took place within the microsystem. Interactions and the “other” category for stressors and resources were the only constructs found in each level of the ecological model.

Chapter 5: Discussion

This study looked at the relationship between stressor events, resources and depressive symptoms in rural, low-income mothers. The study built on a previous investigation examining ways in which rural, low-income mothers utilize resources as they handle the daily stressors they face living in economically disadvantaged rural areas. A high percentage of the population lives slightly above, at or below the poverty line. While much research has looked at stress theory and resiliency theory, little has been done to understand how these theories interact in terms of depressive symptoms.

Stress Theory

This study combined stress theory and resiliency theory to better understand how stressor events and resources affect depressive symptoms as sole entities and through their interaction. Stress theory, originally developed by Hill (1958) and adapted by Boss (2002), looks at how stressor events interact with perception of the event and the resources of the individual or family to determine the degree of stress experienced (see Chapter 2). Figure 2 shows the adapted stress model used in this study.

The Relationship between Stressor Events, Resources and Depressive Symptoms

It was hypothesized that a higher number of stressor events would be associated with a higher level of depressive symptoms. A stepwise regression was conducted on the variables and confirmed this hypothesis. These mothers were at-risk for increased strain from daily stressor events. Rural, low-income mothers have a difficult time “bouncing back” from hardships, many of which are a result of poverty and isolation (Vandergriff-Avery, Anderson, & Braun, 2004); the inability to bounce back may create a pile-up of stressor events that leads to a lower level of functioning and depressive symptoms.

Although the results of this study did not show a significant association between resources and depressive symptoms, strengthening resources may increase the protective function they serve.

Additionally, it was hypothesized that: (a) a higher number of stressor events at time one would be associated with a higher level of depressive symptoms at time two; (b) a higher number of resources at time one would be associated with lower levels of depressive symptoms at time one and time two; and (c) resources at time one will moderate the effects of stressor events at time one on depressive symptoms at time two. The findings of this study did not support these hypotheses. In the significant moderation effect, the resources appeared to exacerbate the relationship between stressor events and depressive symptoms. Several explanations are possible to explain this finding.

The “Hidden Cost” of Resources

Stress theory includes resources as one determinant of the degree of stress (depressive symptoms in this study) felt by a family after an event occurs. The results of this study add to stress theory by showing that resources are not always protective in nature. Stress theory does not take into account the changing nature of resources. What may protect at one point in time may be considered a stressor at another point in time. The words of the mothers highlighted this relationship of cost to benefit.

While having a large number of resources is commonly associated with more positive outcomes, it is important to look at how these resources may also be considered stressors by those who employ them. The original stress model viewed resources as “buffers”, or protection from the negative effects of stressor events (Cowan et al., 1996; McKenry & Price, 2000). However, many resources employed by rural, low-income

mothers have a “hidden cost”, or an unintentional amount of stress or strain associated with them. For example, having a support network is a resource employed by many of the women in this study; however, a support network is a reciprocal resource, with one person both giving and receiving support (Dezfulian, Waldman, & Braun, 2005). This may become burdensome for mothers who may not be able to handle the demands associated with giving support (Dezfulian, Waldman, & Braun, 2005; Durden, Hill, & Angel, 2007). These demands may come at an inopportune time or may require time or commitment that the mother is not prepared to give (Braun, Dezfulian, & Waldman, 2005). A number of mothers in this study spoke to the hidden cost of having a support network.

Shonda spoke about the different ways her mother supported her: “My mother lives in Easton...so wherever we need to go we have transportation.” Shonda also spoke about how her mother watched her daughter so she could have some time to herself: “...on the weekends, my mother or my sister come and get her anyway.” If researchers and practitioners were to look at those statements without looking at the details of their relationship, they would conclude that her mother provides her adequate support that serves to protect her. However, by looking further they would find that Shonda must support her mother through her depression, which is causing a toll on Shonda:

My mother, I talk to my mom every day, but it’s like, more or less a depressing situation. I try not to talk to her. I mean, I love my mom to death, but I try not to really...’cause she’s stays depressed now. It’s like a depressing situation when I do talk to her, it just works on my mind. It works on me. It depresses me when I talk to my mom.

While the instrumental support Shonda received from her mother was helpful, the expressive support she provided to her mom by talking to her left Shonda feeling stressed and depressed.

Like Shonda, Idette also suffered the hidden costs of having a support network. Idette lived with her aunt and her mom, both of whom helped her with transportation and did not ask for rent money. With their support Idette had a safe and reliable place to live as well as transportation to get her to and from work. While these resources were helpful, Idette had to provide support in the form of watching her younger sister in return. As previously quoted, Idette felt that the hardest part of being a parent was “having the patience and energy to deal with both of them [her son and her sister].” She also described the strain she felt having to help her brother with his health problems: “That’s one of those things. You got to stop what you’re doing because he’ll call you up, ‘can you bring my pump?’ So it interferes with what you’re doing...” Both of these mother’s experiences describe the reciprocal nature of social support and the demands that occur as a result of having support.

The hidden cost of resources was also prevalent in the mother’s descriptions of their experience with community social services. All of the mothers in this study were living slightly above, at or below the poverty line and had at least one child. Financial problems was the second most common stressor in the lives of these mothers and had an important impact on their ability to reduce stress and strain in other areas, such as the inability to finance their education to advance their employability. Yet, many of them described negative experiences with social services because they were considered to be “over income”.

Charity had a problem getting her son into Head Start: “I’m just over the mark to get any type of help. I tried to get my son in Head Start. I’m over income. It’s very, very low.” Many women reported that social services considered them over income because they did not take all their costs into account. LaDonna described her experience when trying to get help for her son:

[The new welfare regulations] stink. Because they don’t look at kids as a factor. Some people can’t work because of their kids. They don’t take that into consideration...I mean, I’ve tried for help with Gervaise...No one would help me. No matter what, they would not help me...I either made too much, and when I was working I made a hundred and eighty a week after taxes. I had to pay two hundred fifty dollars a month rent, utilities, car payment, car insurance...I either made too much for something, or I didn’t qualify at all.

Shonda worked hard to have a job so that she could provide for her family, yet, her income kept her from receiving services she needed.

Many mothers described the hidden cost of having assets. For example, having a car is an important protective factor that the mothers employed to help them get to and from work, the store, doctors appointments, and anywhere else they needed to go. Yet many of the mothers perceived that having a car kept them from receiving government assistance. Fiona described how having a reliable car affected their ability to receive services when her husband could not work due to an injury:

We had no income in for four weeks and because we have a new car we got punished and couldn’t get no help....They punish us for having just a decent car and he’s out there working. And we’ve known people that’s got low paying jobs

and yet still getting help and not really paying no rent and getting help, getting food stamps. And we're doing everything on our own and not needing to get help. And when we need help, just because of an injury, you know you can't get help. So it, it's frustrating.

Sonja described a similar experience when she tried to get help paying for her son's medical bills:

Say like when my first son was and we had no insurance and he was very sick. And we came to apply for insurance but because my husband had equipment [for his job], they counted that against us. So then it was like they didn't help us...So there are times when the working person needs help and I think they should help more....there are also times when people need it and they don't get it.

Sonja thought owning equipment, so her husband could work, was a protective resource bought it but resulted in stress when she could not receive assistance.

Strength of Resources

Stress theory doesn't take into consideration the strength of the resources employed. Strength could be defined as depth and dependability. For example, having a car could be counted as a resource but if it's not dependable, it's not a strong resource. Having a small amount of savings may not be adequate for unexpected needs like car repairs. By not measuring strength, stress theory may overestimate the protective nature of a resource.

It is plausible that the findings of this study did not support the hypothesis regarding the protective effects of resources because the resources were insufficient in strength to buffer stressors, resulting in more stress for the mother and the family. While

a mother may have a large number of resources available, their presence may not provide a strong buffer against stressors. For example, a mother may report having childcare, but the childcare she is using may not be reliable or safe. As previously quoted, Thelma talked about her mother-in-law watching her daughter but that it made it harder on her because her mother-in-law was not dependable. Kewona relied on her aunt for childcare but was concerned about her daughter being picked on by the other children being watched by her aunt. The sole fact that these mothers have childcare did not necessarily decrease the amount of stress and strain they felt due to the negative aspects of the care their children were receiving.

Housing and transportation are also resources that may result in stress as a result of their limited strength. Having a place to live and a car may serve as resources for many mothers, however, it may also increase stress if they are not reliable or if their house is too small. When asked what the worst thing about where she lives is Shonda replied:

The house. The landlord, he's a poor landlord. He doesn't want to fix anything...its a few things that need to be done and he doesn't want to fix it or do it or whatever. It's like, our water bill is at least eighty dollars a month and it's supposed to be twenty three or twenty each month. It's a leak in our house, it's underneath our house. I mean he's saying he's going to get somebody around there to fix it and he never does.

Sally also talked about problems she experienced with her housing: "Our other house is loaded with mildew. My husband's bathroom is falling apart. It's gross. It could be an ad for 'this house needs to be condemned'." Both of these mothers had a roof over their head but their houses were not in good condition, causing them more stress.

While the mere presence of certain resources serve to support mothers and their families, this study suggests that stress theory be expanded to measure how resources help or hinder mothers dealing with stressor events. A better assessment of depth and dependability of resources could help determine whether or not they will serve to protect against stress and depressive symptoms. By solely looking at whether or not a resource is present, researchers and practitioners are missing a key part of the mothers' context — their perspectives as to the costs and benefits of those resources.

Ecological Model

The ecological model, originally developed by Urie Bronfenbrenner (1979), is an underlying theory for this study and promotes a better understanding of how rural, low-income mothers and their families fit into a larger system. The stressor factors and resources examined in this study take place in various systems of the ecological model, with many present in more than one system (see Table 9). The context of this study, rural poverty, takes place within the macrosystem of this model. In this study the macrosystem, rural poverty, caused a ripple effect, making it more difficult for the mothers studied to adjust to stressors present in the microsystem, the mesosystem, and the exosystem. Knowing where each stressor event and protective resource occurs within the ecological model allows for a clearer understand of this ripple effect, which is related to the pile-up of stressors experienced by many mothers. In turn, such a comprehensive understanding of the lived experiences of these mothers and their families permits practitioners of social services, mental health, and community educators to work together to provide integrative and mutually supportive assistance to these families.

The results of the ecological analysis show that the first place to intervene is at the microsystem level. The results of this study showed that a higher number of stressor events were associated with higher levels of depressive symptoms. Twelve out of sixteen stressor events took place in the microsystem. By intervening at the microsystem level, practitioners could help families decrease the number of stressors they face, which in turn may help decrease depressive symptoms. For example, the two most frequently cited stressor events, parenting hardships and worries and financial problems, could be addressed through community education programs to build knowledge and skills. Part of that education could be an explanation of the resources available in the community and the conditions for accessing those resources. For the worries of mothers about their children which have a community basis, such as behaviors that make the neighborhood unsafe, community leaders could undertake changes in the exosystem that could reduce some of the stressors felt by mothers, especially for their older children who faced limited recreation and other opportunities in their communities. In addition to financial education to reduce financial stressors, the community could provide asset building opportunities where savings of the family are matched to provide an asset base for housing, schooling, or starting a business.

The interrelations of the mesosystem and exosystem on the microsystem provide the rationale for intervention at the external systems levels. While only eight out of twenty-one resources were found in the mesosystem and exosystem, they affect what's happening to individuals and immediate families. By working with communities and creating policies that strengthen resources in these levels, practitioners and policy makers

would be increasing the number of available resources and helping to prevent, reduce or eliminate some of the stressors identified in this study.

Limitations of the Study

While this study provided rich insight into the lives of rural, low-income mothers, and information useful to such human services as marriage and family therapy, social services and family development and finance education, it did have limitations. The first limitation was the sample and small sample size.

The sample was limited to rural, low-income mothers residing in Maryland who were recruited as a convenience sample and not representative of the population under study. A future study could be expanded to include the approximately 413 mothers in the 13 other states who were part of the *Rural Families Speak* longitudinal study and used the same protocols. Once the methodology is tested with a larger sample, other samples of rural, low-income mothers could be sought.

Having a small, limited number of participants decreases the statistical capacity for analysis. Too little power can result in the inability to detect any real relationships among the variables in the sample. A larger sample would increase power, making it more likely for researchers to be able to detect true differences in the sample population.

Another limitation was the use of a secondary data source. The interview protocol was designed for the *Rural Families Speak* study; the questions asked were related to the information the researchers in the *RFS* study were seeking to understand, specifically the financial and general well-being of the sample. Some questions did directly ask about one or more of the constructs being studied; other constructs, however, were never asked about directly. This led to some stressor events and resources being more frequently

mentioned. For future investigations of the phenomena under study, an interview protocol that directly relates to the constructs being studied would allow for a more thorough measure of resources and stressor events.

The study was based on a pilot-tested coding scheme developed by the Maryland *Rural Families Speak* research team. There are possible flaws in the factors measured and the definitions of the factors. For example, the coding scheme did not include many of the resources employed by the mothers and their families, such as job factors, childcare, and good health. With no specific codes, these resources were coded under “other”. The examination of the most frequent resources was limited by the inclusion of so many different resources under the “other” category. There is also the possibility that though this structured content analysis was conducted by two readers and checked for inter-rater reliability, errors occurred in representing the phenomena under investigation.

A key limitation of this study was related to the meaning assigned to resources and stressor events. The current research study looked at frequencies of stressor events and resources; however, the relation of stressor events and resources to depressive symptoms may not be related to frequency but to type and strength or depth and dependability of the event and/or resource. While the current study looked at the “type” of resource, weighting of different types was beyond the scope of this exploratory study but could be addressed in another study. In a similar manner, the stressor events were not necessarily equal in value or impact. A possible method to address these limitations could be to assign each stressor event a value. For example, the Holmes and Rahe “Social Readjustment Scale” (1967) assigns a score to various life events. This scale provides a total score associated with the events identified by each individual and then given the

percent chance that they will develop a stress-related illness (Holmes & Rahe, 1967). By assigning each event identified in this study a score or value, a better understanding of how stressor events play a role in the maintenance of depressive symptoms might be possible. In future studies designed to study these events, participants could be asked to self-identify the events that have occurred in the lives.

Another limitation of this study is that it did not examine other areas of psychological functioning. This study only measured the construct of depressive symptoms even though the mothers may have been experiencing other psychological symptoms that affected their perceptions of stressor events and resources.

There are also a number of threats to external validity for this study. The first was related to sample characteristics that may affect the generalizability of the findings. The results are limited to those mothers and families that received support from the Family Service Center in Dorchester County and from Garrett Works or Head Start in Garrett County and were willing to participate in the study. There was no way to determine if there are specific characteristics that brought the mothers to these service agencies. Those who sought services may be very different than those who did not. For example, the mothers included in this study already had access to particular resources, such as community resources, because they were receiving services from the agencies. Those who do not receive services from the agencies may have employed other protective factors or may not have had the number and kinds of stressors or ability to access resources that would have brought them into contact with community resources. There was also an age requirement of participants. In order to participate in the *RFS* study mothers had to be over the age of 18. The study did not speak to the lives of teen

mothers, who may face more stressor events based on their young age though many of the mothers were teenagers at the birth of their first child. Mothers also had to have at least one child under the age of 12. This limited the study by not including mothers whose children are already teens. A broader sample would increase generalizability and eliminate this threat to external validity.

Another threat to external validity was related to the timing of measurement. The current study assessed resources and stressor events over a one year period. A crisis or particular stressor event that may have occurred closer to the time of assessment may affect their perception of resources and stressors at the time of the interview. This would affect the frequency of each factor found in the qualitative interviews.

A final limitation to this study is the lack of comparison group of those who are not living in low-income and/or non-rural areas. While the context of this study is rural, low-income mothers, there is no way to assess if the context is what impacted these mother's perceptions of stressor events and resources. The results of the current study cannot be compared to participants in other economic groups.

Recommendations

For Future Research

The findings and limitations of this study suggest a number of recommendations for future research:

1. Continue research into stressor events, resources, and depressive symptoms over time. A chronosystem analysis would allow for greater understanding of how stressor events change and/or pileup over time and how people vary the resources they employ based on their current context. Looking at later waves of data would

allow researchers to understand how changes over time affect depressive symptoms. Including all the waves of data would allow for more descriptive data as well as a more thorough analysis of how resources moderate the effects of stressor events on depressive symptoms over time.

2. Another line of inquiry, based on the results of this study, is to examine how stressor events are moderated by resources based on county of residence. Garrett county Maryland is primarily composed of Caucasian and some Native American families while Dorchester county Maryland has a large proportion of African American families. Looking at this study by county would allow researchers to gain a more in-depth understanding of the association between race/minority status and stressor events and resources.
3. This study highlighted the need for more quantitative and qualitative analysis in the area of stressor events, protective, resources, and depressive symptoms. Future research should be conducted on a larger sample from *Rural Families Speak* which would provide more power and further details to enhance the quality of the research.
4. Future studies could investigate whether or not the findings of this study hold true in other populations, such as teen mothers or those who live in urban areas. By looking at other samples, and if possible drawing on a more random sample, researchers would be able to determine if the results of the current study are generalizable to other populations.
5. Future research could use a more directed interview protocol to better understand the particular stressor events and resources being assessed, including their

strength or depth and dependability. The protocol could ask questions directly related to each segment of the coding scheme.

6. Future investigations could use a measure of depressive symptoms that produces a more scaled measurement. Although the CES-D does view higher scores as indicative of more depressive symptoms, it does not give a range beyond saying that those who score a 16 or above display depressive symptoms. Using a measure that produces more distinct ranges of depressive symptoms, such as the Beck Depression Inventory (Beck, 1972), would allow researchers a more in depth understanding of the association between stressor events, protective resources, and depressive symptoms.
7. Another recommendation is that future studies look at how each resource moderates the impact of the total number of stressors and vice versa. Researchers could also look at individual protective factors and their moderating effect on individual stressors. For example, researchers could look at how family accord moderates the stressors of parenting hardships.
8. Future studies could look at other aspects of psychological functioning and well-being. This study only assessed depressive symptoms. Future studies could look at the significance of other areas of psychological functioning, such as the presence of anxiety and other diagnosable disorders, such as bi-polar disorder or schizophrenia.
9. Future resources could be expanded to include interviews with other immediate and extended family members to gather their perspectives regarding resource

reciprocity between them and the mother to provide their perspective on hidden costs of sharing resources.

10. A final recommendation is to interview informal and formal social support providers to learn their perspectives on resources and stressors facing their family members or the families they serve or could serve.

For Mental Health Practitioners, Social Service Practitioners, and Public Policy

The findings of this study speak to the direct need for mental health practitioners, and social service workers to look at rural, low-income families through an ecological lens. It is imperative to look at each system within the ecological model in order to understand their impact on mothers and their families. Stressor events and resources are found in each level of the ecological model; knowing where they occur will help public policy makers determine what policies need to be reexamined or developed in order to strengthen the protective nature of resources and decrease the number of stressors experienced by vulnerable populations. By exploring the various levels at which individuals and families function, mental health practitioners will gain a better understanding of all aspects of family and community life that are affecting their clients. By understanding the complete context in which their clients live, mental health practitioners will be better equipped to serve their clients. Community educators could offer more customized education if their classes took into account the multiple stressors and resources that affect their learners.

A second recommendation is for social service agencies and public policy makers to look at a breadth of conditions affecting families directly when determining public assistance benefits. This study showed that the financial strains faced by rural, low-

income mothers are often overlooked when determining public assistance due to income and assets based on mother's perceptions. Policy makers and social service agencies should consider all bills, such as rent/mortgage and electricity, and expenses, such as the cost of food and clothing, into account rather than looking solely at income and assets. This is increasingly true in a time when the cost of fuel, utilities and food are rising rapidly. A more in-depth assessment would allow policy makers and social services agencies to gauge the true need for public assistance.

A final recommendation is that mental health practitioners should consider working with researchers, and vice versa, to develop a screening device that would look at the stressor events and resources present in the lives of those seeking help. An assessment tool, such as a self-report questionnaire, would allow mental health practitioners, social workers, and community educators insight into the lives of these mothers and help guide them in their evaluation of individually focused and family focused treatments. Clinicians and policy-makers need to look beyond the mere presence of a stressor or resource in order to understand the nature of them. An assessment tool that allows the individuals and families to describe the stressors they face and the resources they employ would create a deeper understanding of the how their lives are being affected. Further, if that assessment included a measure of strength, or depth and dependability of the resources clients possess prior to treatment, mental health practitioners and social workers will be better equipped to determine the most appropriate place to intervene. Classifying the components of the assessment by the levels of the ecosystem would further reveal the system level for professional intervention. By assessing family situations, including context of locality, prior to educational

programming, community educators will be better able to integrate knowledge and skills and behavior needed to address the complex nature of stressor events and resources. Such a pre-assessment also helps practitioners understand what resources may need to be strengthened in their clients' lives. The assessment could be conducted prior, during and after intervention to identify changes and progress. Together with university researchers, these practitioners could validate the instrument and determine its reliability as part of a community-based research and application investigation.

Conclusions

The main purpose of this study was to examine the relationships among stressor events, resources, and depressive symptoms in rural, low-income mothers. It was expected that resources would moderate the negative effects on stressor events on depressive symptoms, such that the higher the number of resources a mother employs the more she is able to combat the negative effects of stressor events to display a lower number of depressive symptoms. However, this was not true in this sample population. Although the mothers did employ a variety of resources while under the chronic stress of rural poverty, these resources did not moderate the effects of daily stressors on depressive symptoms in the direction that was predicted. This study predicted that higher levels of resources would moderate the negative effects of stress on depressive symptoms, such that when the level of resources is high the association between the degree of stressors and degree of depressive symptoms will be weaker than when the level of resources is low. However, this study found that while there was a significant moderation effect, the effect was such that when levels of resources were high the association between the degree of stressors and degree of depressive symptoms was strongest. One interpretation

of this finding is that some resources also come with a cost that may cause more stress than their resources can protect against. Another plausible explanation of this finding is that although mothers may employ a large number of resources, the strength of these resources is low and therefore the resources do not protect against the strain associated with stressor events.

This finding leads to one, potentially vital, conclusion: It is imperative to understand a mother and her family's context, from an ecosystem point of view, in order to better understand how resources and stressors impact her depressive symptoms. This study offers initial insight into the nature of resources and calls for answers to the question: *If the costs are exceeding the protective nature of resources how can practitioners and policy makers work to strengthen the positive aspects of resources in order to decrease the incidence of depressive symptoms in vulnerable populations?*

Appendix A – Recruitment Flier

You are invited to be part of the, **Rural Families Speak**. Extension educators at the University of Maryland College Park want to learn about the well-being of rural families. We are especially interested in learning how changes in public assistance programs are affecting rural families in Dorchester County.

Who's invited to be part of the project?

Families with at least one child 12 years old or younger who lives at home.



If you are a part of the project, you will be asked about:



- living in your community;
- the services available to you and your family;
- the challenges of working and earning a living;
- your family and raising children; and
- what is hard for your family and what you would like to have changed.

If you are a part of the project:



- You will be interviewed at the Family Service Center.
- You will be interviewed for about 2 hours at a time convenient for you.
- The interview will be tape recorded because we want to be sure to have *your* words.
- You will be interviewed a 2nd time in about 1 year and a 3rd time in about 2 years.
- Your interviews will *not* be shared with any public assistance programs.
- Your participation in this project will *not* affect your benefits from the state of Maryland.
- You will receive a gift worth about \$25 after *each* interview.

Who else is doing a project like this?

Researchers at universities in 16 other states are working together on this project. The information from all the states will be combined so that we can tell the story of what is happening to rural families eligible for public assistance throughout the United States. Your stories will be used to inform policy and programs here in Dorchester, Maryland, and the U.S. Congress.

*If you have questions or concerns about this project, officially named, "Rural Low-Income Families: Tracking Well-Being and Functioning in the Context of Welfare Reform," you can call 301-405-3581, the private number of Bonnie Braun, project leader who will gladly answer your questions.

Appendix B - Recruitment Poster

Would you like a \$25 gift card to Wal-Mart? How about a free book for your children?



ALL ANSWERS WILL BE KEPT CONFIDENTIAL!

All you need to do is spend about 2 hours answering some questions about you, your family, and your community.

If you would like more information, or would like to make an appointment to receive your \$25 gift card and free book, please see Brady Johnson.



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Appendix C – Coding Scheme Developed by the University of Maryland Research Team

PROTECTIVE EVENTS: Mention of any perception, resource, and/or action used by any family member to combat or prevent the tension, strain, pressure, and/or imbalance associated with a stressor event.

<u>Accord:</u> Harmony; Balanced interrelationships/things going well w/partner with family members that allows them to resolve conflicts and reduce chronic strain.
<u>Communication:</u> Sharing emotions and beliefs with other family members; focuses specifically on how family members exchange information and caring with one another.
<u>Hardiness:</u> Family member's sense of control over their lives, [commitment to the family]*, confidence that the family will survive no matter what, and the ability to grow, learn and challenge each other.
<u>Support Network:</u> The positive aspects of relationships with in-laws, relatives, and friends.
<u>Time & Routines:</u> Family members' preferences about how time spent in the family and whether or not these preferences are similar or different; ordinary routines in families' lives, such as chores, family meals, and togetherness, which help promote continuity and stability within the family [can be routines that include extended family].
<u>Husband/Partner Helps with Parenting:</u> Involvement with child rearing—physical, emotional, and/or financial.
<u>Parental Love/Care:</u> Valuing of one's children emotionally [e.g., children's present/future happiness].
<u>Faith/Religion:</u> Evidence of a belief system that is supportive of individual or family living.
<u>Protection of Family/Children:</u> Evidence of actions taken to avoid physical, emotional, social and or mental problems affecting individuals and the family as a whole.
<u>Family Pride:</u> Valuing of family as it is and what it does.
<u>Avoidance:</u> Prevention of problems or crises.
<u>Parental Strengths/Confidence:</u> Evidence of ability and acknowledgement of ability to adequately parent a child and meet his/her developmental needs.
<u>Financial Management:</u> Ability to make sound money management decisions [include using money wisely; planning for the use income]; economic status satisfaction that can impact family well-being.
<u>Family Teachings/Values:</u> Evidence of matters of importance to individuals and/or practices that are conveyed to family members
<u>Community Resources:</u> Evidence of availability, access, and/or positive interactions with personnel [includes use/access to (but limited to) food stamps, TANF, WIC, Medicaid, etc.] [Does not include clothing as clothing is not a "community" resource].
<u>Community quality of life:</u> evidence of safety, security, acceptance, and belonging.
<u>Education:</u> Pursuit and/or achievement of formal and/or informal education, including but not limited to GED, higher education classes, and experiences such as parenting workshops.
<u>Hopefulness:</u> Hope or optimism about the future for self and/or family members
<u>Housing:</u> Reports living in and/or owning stable, safe housing
<u>Transportation:</u> Access and use of reliable, safe, and affordable transportation
<u>Other:</u> Health, celebrations, traditions, [job factors (e.g., raises, additional hours, benefits)], [parents spending time with children—not a routine], others

STRESSOR EVENTS: Mention of any event, occurrence, or situation that produces negative tension, strain, pressure, and/or imbalance within the family and **DOES NOT** meet the criteria associated with a family crisis.

<u>Parenting Hardships/Worries:</u> Includes patience/energy; sibling rivalry; discipline; raising children.
<u>Single Parenthood:</u> Having to be “both” parents; stress for both children and mother of having an absent parent; father’s lack of emotional support; father’s lack of financial support.
<u>Relationship Problems:</u> Problems in relationships partner and/or with nuclear family.
<u>Interactions:</u> With extended family; members of community; agencies ;organizations.
<u>Financial Problems:</u> [when respondents specifically state a financial matter was a problem for them as opposed to a “yes” or “no” answer to a question.]
<u>Health Related Problems</u>
<u>Housing Problems:</u> Includes utilities, problems with landlords
<u>Transportation Problems</u>
<u>Jobs/Employment Related Problems:</u> Includes specifically job, does not include benefits
<u>Non-Parental Childcare Problems</u>
<u>Religious Concerns</u>
<u>Legal Issues</u>
<u>Availability and/or Access to Community Resources [Includes food stamps, TANF, WIC, etc. Not clothing]</u>
<u>Community Concerns:</u> Includes concerns with safety; security; acceptance; belonging.
<u>Time:</u> Reports of not enough time; conflicts of how to get things completed/prioritize due to time challenges.
<u>Other:</u> Lack of hope; expressly being dissatisfied with lack of education; lack of social support.

* Brackets designate modification to the coding scheme during a pilot test prior to this study.

Appendix D - Center for Epidemiological Studies Depression Scale (Radloff, 1977)

FEELINGS ABOUT HOW THINGS ARE GOING

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

	Rarely or none of the time 0	A little of the time 1	A moderate amount of time 2	Most or all of the time 3
1. I was bothered by things that don't usually bother me.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. I did not feel like eating; my appetite was poor.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I felt that I could not shake the blues even with help from my family and friends.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I felt that I was just as good as other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I had trouble keeping my mind on what I was doing.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I felt depressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I felt that everything I did was an effort....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I felt hopeful about the future.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I thought my life had been a failure.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I felt fearful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. My sleep was restless.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I was happy.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I talked less than usual.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I felt lonely.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. People were unfriendly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I enjoyed life.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I had crying spells.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I felt sad.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I felt that people disliked me.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I could not "get going"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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