

COPING WITH FOOD VULNERABILITY:  
THE ROLE OF SOCIAL NETWORKS IN THE LIVES  
OF MISSOURI FOOD PANTRY CLIENTS

A Thesis  
presented to  
the Faculty of the Graduate School  
at the University of Missouri-Columbia

In Partial Fulfillment  
of the Requirements for the Degree

Master of Arts

by  
JENNIFER J. BEGGS

Dr. Joan M. Hermsen, Thesis Supervisor

DECEMBER 2006

The undersigned, appointed by the dean of the Graduate School, have examined the thesis entitled

COPING WITH FOOD VULNERABILITY:  
THE ROLE OF SOCIAL NETWORKS IN THE LIVES  
OF MISSOURI FOOD PANTRY CLIENTS

presented by Jennifer J. Beggs,

a candidate for the degree of master of arts,

and hereby certify that, in their opinion, it is worthy of acceptance.

---

Professor Joan M. Hermsen

---

Professor Clarence Y. H. Lo

---

Dr. Matt Foulkes

## *Acknowledgements*

I would like to acknowledge the assistance and contributions of several people whose help was nothing short of instrumental in the completion of this project. First, many thanks to my committee members, Dr. Matt Foulkes and Dr. Clarence Lo, for taking the time to read my work, for attending early meetings, for spending time on the phone simply listening, and for asking all of the challenging questions that were inherently necessary in maintaining the quality and integrity of the story at hand.

The latter was especially true of Dr. Joan Hermsen, my thesis chair, who was always available, always supportive, and always encouraging. She repeatedly nurtured my excitement, reassured me in times of fear and anxiety, and counseled me in times of frustration. Most importantly, her liberal guidance allowed me to create a project that was entirely my own. As I prepare to embark upon the next stage of my academic career, I am grateful to have one of the finest intellectual scholars at Mizzou as my mentor and my friend.

There are many other people whose support of my completion of this project began long before I ever arrived at Mizzou. To my mom, Debra Dukes, who inspired a true love of reading and writing and learning; without her lifelong encouragement, this project would not exist. To my stepfather, Paul Dukes, who moved me more times than either of us can count, all in support of my academic goals. To my dad, Myron Beggs, and my stepmother, Angela Beggs, who continually reinforced the importance of “keeping things in perspective” despite all of the stress that life brings. To my sisters,

Cara, Erin, and Bethany, who never failed to make me laugh, especially when I needed it most.

Finally, I wish to thank my partner-in-crime, my husband-to-be, Nathan Weber. From the very beginning of this process, his devotion and dedication has been critical in my ability to complete this thesis. I can not possibly put into words all of the ways in which he helped, encouraged and supported me throughout this all-consuming task. He relocated with me, he cooked for me, he drove me through snowstorms, and he was always there with a joke, a pep talk, or a beer. He proofread my work, and he asked the ever-important questions that only a person outside the field of sociology can ask, all with the objective of keeping this story real and accessible.

Without all of the aforementioned people, this thesis certainly would not have been accomplished. Their loyalty is nothing short of inspiring.

*Table of Contents*

ACKNOWLEDGEMENTS.....ii

LIST OF TABLES.....vi

ABSTRACT.....vii

INTRODUCTION.....1

REVIEW OF RELEVANT RESEARCH.....3

    Food Insecurity

    Real People

    Dealing with a Lack of Food

    Social Networks

THE RESEARCH QUESTIONS.....19

METHOD.....20

    Data and Sample

    Limitations

    Variables

    Statistical Method

FINDINGS.....25

    Descriptive Analysis

    Multivariate Analysis

    Networks as concentric or nonconcentric

DISCUSSION.....42

IMPLICATIONS FOR POLICY AND PRACTICE.....46

NOTES.....48

APPENDIX.....49

Central Missouri Food Bank Service Region

REFERENCES.....50

*List of Tables*

TABLE 1: Percentages of Persons Who Have Received  
Food from Relatives.....26

TABLE 2: Percentages of Persons Who Have Received  
Food From Friends.....28

TABLE 3: Percentages of Persons Who Have Received  
Food From Coworkers.....30

TABLE 4: Percentages of Persons Who Have Received  
Food From Neighbors.....32

TABLE 5: OLS Regression of Social Networks Used By  
Selected Characteristics.....34

TABLE 6: Frequency of Sources in Network.....37

TABLE 7: Percentages of Those Who Relied on Social Networks  
Across Family, Friends, Coworkers, and Neighbors.....38

TABLE 8: Frequency of Variation in the Composition of  
Social Networks.....39

TABLE 9: Percentages of Persons who Received Food Assistance  
And Received It Every Month from Family, Friends, Coworkers  
And Neighbors.....40

TABLE 10: Mean Number of Hardships Across Number of  
Sources.....41

**COPING WITH FOOD VULNERABILITY:  
THE ROLE OF SOCIAL NETWORKS IN THE LIVES  
OF MISSOURI FOOD PANTRY CLIENTS**

**ABSTRACT**

This paper utilizes data from *Coping with Hunger: Food Pantry Clients in the Central Missouri Food Bank Region* (2005) to better understand the ways in which informal social networks are utilized by families and individuals coping with food insecurity. Social networks included family, friends, coworkers, and neighbors. Descriptive and multivariate analyses indicate that utilization of these networks vary by gender, race, education, and marital status, among other characteristics. The findings of this study indicate that social networks are concentric, meaning that people tend to rely primarily on family, followed by friends, then neighbors and coworkers. The number of reported hardships is found to be highly significant in influencing who persons are likely to turn to.



## *Introduction*

In 2003, Shawn Fremstad noted the contrasting numbers amidst the decreasing welfare roles and poverty statistics. Specifically, Fremstad (2003) draws attention to the fact that while the U.S. Department of Health and Human Services made repeated announcements of the continued decline of welfare roles, the U.S. Census Bureau released data illustrating the marked increases in child poverty. Similarly, Sharon Hays (2003) argues that while welfare cases reportedly declined by over 50% between 1996 and 2000, the number of families living in dismal poverty declined by only 15%. Specifically, Hays argues that half of former welfare recipients are without enough money to buy food and one-third have to cut the size of their meals (2003). While the focus of this study is not an analysis of welfare recipients or former recipients, the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) has had a monumental impact on the lived experiences of those in poverty. According to Berner & O'Brien (2004), while the number of food stamp recipients has fluctuated since the mid-1990s, food bank output has consistently increased. Hence, the passage of PRWORA has resulted in an increased potential for many more families to suffer from food vulnerability. And, while these persons are less likely to be relying on government issued food stamps, the statistics indicate that they are still unable to subsist independently. Clearly, the increasing numbers of persons attending food banks and food pantries are well documented. However, even the generosity of local food banks is unable to provide the amounts of food necessary to feed all of those suffering from food vulnerability. As such, the following questions are raised: Aside from government

assistance and private food banks and charities, who do food-vulnerable persons turn to for help? How do food-vulnerable persons utilize their own social networks?

Consequently, the purpose of this study is to examine the role of social networks in assisting persons facing food vulnerability. Much of the research on coping with food insecurity focuses on the utilization of public and private sources of food, specifically the use of food stamps and/or the regularity with which low income persons visit food pantries and food banks. Also, research on social networks has focused primarily on the role of networks in status attainment, job acquisition, mobility and opportunity. A few of the classic sociological texts and some of the early work on social networks described the importance of kin and neighbors in dealing with family stresses or economic crises. However, very few studies expressly examine the function of social networks in the lives of those who are distinctly food vulnerable. Moreover, even fewer studies examine the specific ways in which those networks are utilized. Consequently, this study intends to shed light on the types of networks that low-income individuals and families use in their attempts to acquire food, as well as what characteristics enable us to better predict which sources these persons will rely on. Finally, in light of current research that speaks to the increasing social isolation of Americans, this study seeks to determine if informal social networks represent a concentric order of support.

## *Review of Relevant Research*

### *Food Insecurity*

*“On a typical day in November 2004...there were between 614,000 and 854,000 households in the Nation in which one or more members were hungry because the household could not afford enough food (Nord, 2005).”*

Despite the wealth of the United States, a significant minority of American households do not have adequate access to food (Jensen, 2002). According to the most recent report published by the United States Department of Agriculture, 11% of U.S. households were food insecure in 2005. At some point during the previous twelve months, these households struggled to acquire enough food for all household members. Moreover, 3.9% of these households experienced food insecurity with hunger, meaning that at least one household member went hungry during the previous year due to the inability of the household to acquire enough food for all members (Nord, et al. 2006). Sadly enough, the prevalence of hunger among children was 0.7% (over 540,000 children) in 2004 (Hall, 2005; Nord, et al, 2005). Other studies indicate that the number of American households suffering from food insecurity has increased by 43% since 1999, leading some poverty researchers to classify the current state of hunger as an epidemic (Hall, 2005; Schwartz-Nobel, 2002).

The consequences of food insecurity can be profound and long-lasting. In a study examining the effects of food insecurity on children, Ashiabi (2005) found that food insecurity predicted health status, emotional well-being and negatively predicted school engagement. In other words, children who were food insecure had worse health,

tended to exhibit lower levels of school engagement and success, and also tended to display signs of various emotional problems. According to research conducted by Cook, et al (2004), food-insecure children were twice as likely to suffer from poor health and three times as likely to be hospitalized as food-secure children. Similar effects on adults can be further surmised. For example, food insecurity has the strong potential to create multiple barriers to acquiring and/or maintaining employment.

While welfare caseloads and the numbers of food stamp participants have steadily decreased since the mid-1990s, child poverty and national food bank output has consistently increased (Berner & O'Brien, 2004; Fremstad, 2004). These points suggest that people no longer on welfare may be turning to private sources for food assistance. It used to be that emergency food centers, such as food banks, food pantries and soup kitchens, would only open during severe economic downturns. Then, once the crisis was sufficiently alleviated, the food centers would close and wait for the next economic downturn. According to Biggerstaff, et al (2002), this pattern is changing; most emergency food programs are present in nearly every locale and are open permanently. Hence, emergency food centers are vital partners in the nationwide attempt to end hunger and food insecurity; and, as such, provide a great source for social research and understanding. According to the most recent annual report published by America's Second Harvest, their network of food banks and food pantries distributed approximately 2.02 billion pounds of food in 2005. These number have steadily increased since 2003 (1.77 billion) which further supports the argument made by Biggerstaff, et al (2002) that emergency food programs are growing in significance.

## *Real People*

*“But poverty and hunger are no longer confined to the traditionally poor or to the traditional stereotypes of the hungry (Schwartz-Nobel, 2002).”*

Recent studies reveal that a significant number of the persons who seek emergency food assistance are employed, but have difficulty making ends meet (Berner & O’Brien 2004; Biggerstaff, et al. 2002; Knab 2005). For example, Biggerstaff, et al (2002) conducted a study of people seeking food assistance from food pantries and soup kitchens in Virginia and found that more than 25% of respondents were working poor. Moreover, the authors concluded that the most influential risk factors affecting food insecurity included loss of employment during the previous six months or low earnings. Similarly, in a study of persons seeking emergency food assistance, Knab (2005) found that marriage does not necessarily coincide with a decrease in economic hardship. In contrast, even though household income tends to increase after marriage, the experiences of hardship do not change, which also lends credence to increasing numbers of working poor who aren’t quite making it.

Despite the common perception that food pantries provide short-term assistance to those individuals and families suffering from an acute bout of hunger, the reality appears much more complex. Multiple studies have investigated the intersection of public and private organizations as resources for the poor, all showing similar results: households are not substituting one form of assistance for another, but are accessing multiple types when necessary (Bartfield 2003; Bhattarai, et al. 2005; Mosley & Tiehan 2004; Whiting 2006). In other words, food pantries tend not to be a one-time, temporary safety net; but, rather, an ongoing source of support. Food insecurity appears

to motivate families and individuals to look for more than one potential source of food (Bartfield 2003; Bhattarai, et al. 2005).

The examination of other basic, demographic factors presented by earlier research provides descriptions that are nothing short of expected, given current sociological knowledge surrounding race and gender disparities in the experience of poverty. Jensen (2002) found that households headed by single females were 5% more likely to be food insecure. According to an annual report produced by the United States Department of Agriculture, in 2004, households headed by single women with children (30.8%), Black households (22.4%), and Hispanic households (17.9%) had substantially higher rates of food insecurity (Nord, et al, 2005).

#### *Dealing with a Lack of Food*

*“I tried to vary our diet. Once I got a neck bone and they scraped the fat off it and ate pure fat. That’s how hungry they were (Schwartz-Nobel, 2002).”*

Several studies have sought to document the reality of what people do when they are actually faced with food insecurity. The literature describes diverse and creative coping strategies to avoid or delay hunger, ranging from limiting portion sizes to skipping meals (Ahluwalia, et al. 1998; Hoisington, et al. 2002; Kempson, et al. 2002; Maxwell 1996; Schwartz-Nobel 2002). In a study analyzing food pantry users in Washington State, Hoisington, et al. (2002) discovered that a majority of respondents reported attempts to make food last by cutting the bad parts off of food (i.e. cutting mold off of bread) and omitting unaffordable foods such as meat and dairy. Eating one or two meals per day was commonly practiced, while going whole days without eating

was perceived to be more severe and tended to occur less frequently and during certain times of the year (Ahluwalia, et al. 1998; Hoisington, et al. 2002; Maxwell 1996; McIntyre 2003; Schwartz-Nobel 2002). Kempson, et al (2002) found more troubling and riskier practices such as diluting milk and infant formula as well as collecting and eating “roadkill” without concern as to the length of time the animal had been dead. Maxwell (1996) and McIntyre (2003) also illuminated a process of maternal buffering, a practice by which mothers deliberately limit their own intake in efforts to ensure that their children get enough to eat. In a study of 141 low-income mothers, McIntyre (2003) found that mothers’ dietary intake was consistently poorer than their children’s intake. Interestingly, both McIntyre (2003) and Hoisington, et al (2002) reported finding no evidence that suggested that any other household members aside from the mothers did this.

Less typical, but commonly reported nonetheless, was the use of emergency food sources and a reliance on others for food or money to purchase food (Hoisington, et al. 2002; Maxwell 1996; Nelson 2005; Schwartz-Nobel 2002). Across the research, however, most respondents shared the challenge and concurrent frustration of utilizing emergency food pantries and banks, especially while trying to manage school and work schedules (Hoisington, et al. 2002; Maxwell 1996). Additionally, all of the research illustrated the stress and anxiety of relying on social networks for food or money for food. Respondents frequently acknowledged the resulting position of vulnerability and a fear of long-term indebtedness (Ahluwalia, et al. 1998; Hoisington, et al. 2002; Maxwell 1996; McIntyre 2003; Nelson 2005; Schwartz-Nobel 2002).

### *Social Networks*

*“And we have to share the food with my brother and his girlfriend...They kind enough to give us a roof over our heads, so we give them food. It’s only right that we take care of each other. That’s how families are around here (Schwartz-Nobel, 2002).”*

Much of the research on social networks has focused primarily on the role of networks in status attainment, job acquisition, mobility and opportunity. Important articles, by authors such as Mark S. Granovetter, have shed invaluable light on the “strength of weak ties” in acquiring access to job opportunities and the like (Granovetter, 1973). However, this popular path in social network research does not adequately explain who persons are turning to for help with food or housing instability. Additionally, the research on who people turn to for specific help with food acquisition is few and far between. However, there is a substantial amount of literature that speaks to general survival strategies of the poor, some of which includes powerful insight into the role of social networks as part of those strategies. For example, in their groundbreaking study of low-income, single mothers, Edin and Lein (1997) found that there was an order of survival strategies utilized by their respondents. First and foremost, the women tried to rely on their own wages. When this was impossible, the mothers in their study reported turning to personal networks, followed by side jobs or under-the-table income. The last option voiced by women was to turn to agencies. So, clearly, the role of social networks in the survival strategies of the low-income women they studied was vital. As such, this survival strategy deserves more detailed attention. What follows is a brief summary of the relevant research that speaks to the utilization of social networks, as well as what my predecessors have found regarding the influence of gender, race/ethnicity, marital status and other key factors.



*Who relies on who?* A substantial portion of the research indicates that family is the primary source of informal support for the majority of persons who are struggling financially, frequently followed by close friends (Edin & Kefalas, 2006; Edin & Lein 1997; Gringeri 2001; Jayakody, et al 1993; Nelson, 2005; Schwartz-Nobel 2002; Taylor, et al. 1988; Wellman & Wortley 1990). Additionally, some of the research addresses the variation in the utilization of networks based on gender, race/ethnicity, age and marital status. Specifically, several studies suggest that women's networks tend to be comprised primarily of family; whereas men's networks tend to be composed of mostly nonkin, particularly coworkers (Gilbert 1998; Moore 1990; Nelson 2005). For example, Gilbert (1998) found that women used distinctly different networks than men, in that women were more likely to rely on family for emergency support, as well as for financial and non-financial assistance. Edin and Lein (1997) stated that all of their respondents relied heavily on their own mothers for various kinds of support and Gringeri (2001) found that "grandma" was a prominent source of food support and childcare. The relationship between gender and social networks is not without debate, however. A recent article by McPherson, et al (2006) suggests that men and women are becoming increasingly equal in their network compositions. Explicitly, the authors argue that men and women are demonstrating similar levels of kin and nonkin members in their networks. It should be noted, though, that this article examined discussion networks, which while they are inherently applicable to any study of social networks, the relationship between talking about problems and asking for food should, nonetheless, be examined critically.

Multiple studies also indicate that race is important when examining social networks. Schweizer, et al (1998) found that race and ethnicity were highly influential. Specifically, the authors discovered that Hispanic networks tend to include more diverse levels of support in which family, friends and neighbors overlap. In other words, they tend to coreside in neighborhoods with family, so mom and dad are also neighbors. According to the authors, 40% of the core networks of the respondents in their study tended to live within the boundaries of the same community. In an earlier study by Taylor, et al (1988), it was argued that blacks tend to have larger kin networks, and those networks tend to extend beyond the immediate family. Blacks, they suggest, are less likely than whites or Hispanics to identify in-laws as sources of social support; but, they are more likely to mention siblings, cousins, aunts, and uncles. Much like the discussion of gender, however, the relationship between race and social networks is still being contested. Hence, while some articles find that race is an important factor in predicting whether certain persons will turn to family for help, other studies argue otherwise. For example, Tigges, et al (1998) found that whites tend to have larger social networks and that blacks are significantly less likely to expect or receive help from kin. Similarly, Gilbert (1998) argued that while early research suggested that blacks tended to rely more heavily on family, more recent evidence appears to be challenging these assumptions. In line with Tigges, et al (1998), Gilbert (1998) found that blacks were less likely than whites to rely on family for financial and material support. However, it should be noted that, given the high percentages of blacks and Hispanics that live below the poverty level, perhaps acquiring food or money to buy

food from family is not entirely plausible. Hence, a consideration of the intersection of race and class may be necessary.

Three primary studies indicated network differences in relation to marital status: Taylor, et al (1988), Neustrom, et al (2001), and Jayakody, et al (1993). The first article found that divorced/separated respondents were more likely to choose parents as a primary source of assistance; whereas never-married individuals were less likely to indicate parents. In contrast, Neustrom, et al (2001) found that married people were less likely to receive assistance, especially from parents. Jayakody, et al (1993) found that marital status and social support are highly mitigated by poverty and proximity to family. In essence, the authors found that married mothers below the poverty line are more likely to receive financial support; whereas never-married mothers above the poverty line are more likely to receive financial assistance. Additionally, the study showed that married women who live close to their immediate family are less likely to receive financial support than married mothers living farther away. Finally, of all the mothers that lived near their family, never-married mothers are more likely to receive assistance. Similarly, Neustrom, et al (2001) found that married people were less likely to receive assistance, especially from parents. In sum, the interaction of marital status and reliance on social networks appears to be decidedly complicated.

The role of age in assessing the utilization of social support appears to be frequently negated. Very few articles discussed age as influential in shaping support networks. Frequently, studies of single mothers maintained assumptions of youth and undeveloped networks. On the other hand, certain studies sought to understand the experience of food insecurity and/or the networks of seniors, exclusively (Frongillo, et

al 2003; Nord 2002). In their study of social support and food insecurity among elderly persons, Frongillo, et al (2003) found that their respondents relied heavily on family. Moreover, those who relied on non-kin, such as neighbors, tended to live in places with a high concentration of seniors. Similarly, Taylor, et al. (1988) found that in an emergency, younger persons were more likely to rely on parents, that older individuals were more likely to rely on adult children, and that middle-aged respondents tended to rely on both children and parents. It must be duly noted, however, that the term “emergency” requires some discussion and consideration of the role of stigma.

*The confusing place of friends and coworkers.* When considering the role of friends, the research is much more vague. Friends are frequently conflated with family as primary levels of support, except when delineating between types of support given. For example, several studies identify friends as serving primarily as social companions rather than sources of material or monetary support (Schweizer, et al. 1998; Wellman and Wortley 1990). Similarly, coworkers are also frequently lumped into this category. Gilbert (1998) found that a majority of women utilized coworkers for emotional support and socializing, much like friends. Wellman and Wortley (1990) asserted that there are two primary segments of social networks: (1) family and (2) friends, neighbors and coworkers. But, similar to Gilbert (1998) and Schweizer, et al (1998), they found that friends tended to be companions rather than direct sources of material support. Moreover, the authors also stated that support from friends is highly mitigated by the strength of the tie. In contrast, support from family tends to be more reliable, more unconditional.

*Contemplating the role of neighbors: considerations of class and vulnerability.* Some of the early sociological works, such as Gans' landmark book about the Italian enclaves of Boston, *The Urban Villagers*, as well as Carol Stack's *All Our Kin*, spoke to the role of nonkin as important sources of informal support (Gans 1962; Stack 1974). In contrast, newer studies indicate that neighbors are being increasingly excluded by persons when defining their support networks (McPherson, et al 2001; McPherson, et al 2006; Schweizer, et al 1998). For example, McPherson, et al (2006) found that the composition of core networks is shifting away from community and neighborhood ties toward family. Also, Elijah Anderson's discussion of neighborhood changes stemming from gentrification in his book, *Streetwise*, vividly illustrates the shifting role of neighbors. Importantly, the latter example also illustrates that this discussion cannot be isolated from issues of class and personal vulnerability.

In an earlier article by McPherson, et al (2001), the authors proffered a dialogue about the principle of homophily. Specifically, they argue that people tend to relate more frequently to persons similar to themselves, rather than those they consider dissimilar. The consequence is a sort of homogeneity of social, behavioral, and even economic characteristics. For example, social class frequently determines an individual or family's neighborhood of residence (Anderson 1990; Edin & Lein 1997; Hays 2003; McPherson, et al 2001; Tigges, et al 1998; Wilson 1996). Other studies also indicate that the average income of a neighborhood may, in fact, be positively associated with the size of neighborhood networks (Gilbert 1998; Tigges, et al 1998). Moreover, as Hays clearly asserts, it is frequently the poor who assist other poor (2003).

Hence, several considerations surrounding neighbors as social networks must be clearly noted. First, are people less likely to ask neighbors for food, or money to buy food, because those neighbors are equally poor and have little if anything to give? Second, as Edin & Lein (1997) discovered, many of their mothers saw relying on neighbors as potentially dangerous. In essence, the mothers frequently communicated a strong need to be careful as to who they shared their precarious situation with for fear that their children would be taken by the state. Finally, social network-based contributions are rarely free (Edin & Lein 1997; Nelson 2005; Nelson & Smith 1997). This is an important consideration for individuals and families that are constantly on the brink of economic hardship. Nelson and Smith's (1997) study of rural working-class and working-poor households found that relative stability is highly significant in determining the nature of support between households. Specifically, the authors found that households with "good jobs" were more likely to participate in household exchanges, whereas households with "bad jobs" tended protect their scarce resources.

The implications of these findings lend themselves towards additional considerations of vulnerability. First, poorer households can often not afford to wait for pay back from others. Second, poorer households may not be able to lend in the first place. Lastly, as the authors purport, "good job" households may be less likely to provide assistance to poorer households because of the constant inability of the poorer households to repay. In a similar fashion, Edin and Lein (1997) found that their respondents were constantly aware of over-relying on one or more network members for fear that they would be perceived as a drain.

As was briefly mentioned above, in addition to serving as a means of support, multiple studies indicate that families and individuals report that relying on social networks can also be a source of stress (Ahluwalia 1998; Edin & Lein 1997; Hoisington, et al. 2002; Nelson 2005; Nelson & Smith 1999; Schwartz-Nobel 2002; Unger & Powell 1980). Informal social networks are frequently characterized by a rule of reciprocity that can cause additional strain and anxiety that may stem from worry about when and how they are going to pay their lender back (Hoisington 2002; Unger & Powell 1980). Additionally, the borrowing or taking of goods or money can create a condition of dependency, which can also lead to stress (Unger & Powell, 1980).

To further illustrate the importance of social class, a different perspective of single mothers and their reliance on social networks may be useful. Hertz and Ferguson (1998) studied fifty single mothers-by-choice and the richness of their social networks. The label “mothers-by-choice” signifies that the women in their study chose to become unwedded mothers via adoption and insemination. The importance of class is inherent in the described richness of their networks. The women themselves tended to be middle- to upper-class, which, in turn, provided them access to other persons and families of the same economic status. Notably, the authors clearly state that difference between their respondents and those who are poor is that many of their networks may contribute money and resources without the expectation of being paid back. In sum, it is inherently necessary to consider issues of social class when analyzing the role of social networks. Middle-class persons seeking help from other middle-class persons seems entirely different than poor persons seeking help from other poor. This is especially important in discussions of neighbors as sources of material and monetary

support. Again, neighborhoods tend to be segregated by class, and as such, neighbors may have little resources to share.

*Networks as concentric or nonconcentric.* The goal of this study is mirrored in a 1998 study by I.B. Ahluwalia, et al. that was conducted to learn more about the coping strategies of persons who were either at risk of, or had experienced, food insecurity. The authors conducted a qualitative study of 141 individuals who were receiving food assistance from private, nonprofit agencies. The sample included participants from both rural and urban counties. In addition to the aforementioned coping mechanisms, the authors found that respondents also used social networks to manage insufficient food supply. Participants were, reportedly, reluctant to rely on social networks for assistance beyond that needed for short-term problems due to a perceived stress of indebtedness and vulnerability, as was previously stated. Most importantly, Ahluwalia, et al (1998) found that most food insecure persons described three distinct levels of social support. Specifically, most subjects reported that they relied on family first, then friends, followed lastly by neighbors. Hence, this study suggests that the social networks utilized by persons facing food insecurity are, in fact, concentric. Participants in this study reported relying on family on a more regular basis, describing relatives as the most trustworthy of their social networks. Moreover, participants reported relying on friends in addition to family or in response to having little or no family support. For respondents in this study, neighbors tended to constitute a last choice, of sorts, frequently stating that they found it hard to approach neighbors or that they questioned their trustworthiness. Similar to the women in Edin and Lein's (1997) study, their



respondents reported a concern of revealing their precarious situation to neighbors for fear that the neighbors may turn them in to children's services for neglect. Overall, Ahluwalia, et al (1998) found that the social networks reported by persons suffering from food vulnerability tend to be concentric; suggesting that extended networks tended to be used only after family resources had been exhausted.

In contrast, however, Unger & Powell (1980) found that families and individuals rely on different groups for different needs, signifying that social networks are independent and nonconcentric. For example, their respondents frequently reported turning to family for long-term needs, and friends and neighbors for short-term emergencies. Hence, this study suggested that social networks were supplementary, rather than concentric. However, it should be noted that Unger & Powell considered family, friends and neighbors to be primary support groups; whereas, as I have previously suggested, neighbors and coworkers may exist on a secondary realm. In addition, the authors' study was composed only of a review of "research evidence" in attempts to shed light on the role of social networks in supporting families under general stress (Unger & Powell 1980, p. 566). As such, it could potentially be debated as to whether the stigma of the crisis was adequately considered. In other words, can chronic food insecurity be equated with an acute illness or a temporary job loss?

Similarly, Wellman and Wortley (1990) found that different types of ties provide different kinds of support. Specifically, they ascertained that strong ties and parent-child ties tended to be most influential in terms of support. As was briefly stated earlier, they found that immediate family support tended to be unconditional. In contrast, economic and material support from friends tended to be based on the strength

of the tie. Hence, it could be argued that the network support is, in many ways nonconcentric. However, when we take into consideration only support that is material or economic in nature (i.e. food or money to buy food) it is highly plausible that the interpretation could be one of concentric support networks. Again, whether social networks are concentric or nonconcentric for persons who are coping with food insecurity is a clouded issue that this study hopes to clarify.

*The stigma of hunger.* Finally, I believe that a brief discussion about the role of stigma is essential. Within the U.S. it is not uncommon to hear social commentators frequently dismissing the experience of food insecurity as unnecessary and the fault of those who are hungry. It is perceived that in “the land of plenty” there is no adequate reason for any individual to suffer from food vulnerability, minus any lack of personal responsibility (Schwartz-Nobel, 2002). This belief is reiterated time and again and has become a sort of ideological assumption on the part of many Americans, rich and poor alike. The potential consequence is that those poor who frequently face food insecurity are well aware that they will be blamed. Their knowledge of this must be taken into account when considering who such persons will turn to for help. Hence, the abovementioned mothers’ descriptions of not sharing their situation with too many people for fear of having their children taken by the state (Ahluwalia, et al 1998; Edin & Lein 1997). The marked discussions surrounding social distinctions between the “deserving” and “undeserving” poor are vast; too vast, in fact, to adequately develop it here. Nonetheless, consideration of this detail is necessary in any study whose goal is to effectively ponder issues concerning the poor in America. It is my contemplation of

this factor that leads me to wonder whether social networks are concentric or nonconcentric.

### *The Research Questions*

The analyses to follow address four major questions. The first question addresses the nature of one's social networks, the second focuses on the characteristics that predict which type of network one relies on, the third concentrates on whether or not one's networks are concentric, and the fourth question addresses the relationship between the range of one's networks and their experience of hardship.

1. Aside from public and private organizations, who do food-vulnerable individuals/families turn to when they need food or money to purchase food?
2. What characteristics predict the food networks of vulnerable individuals and families?
3. Are social networks (i.e. family, friends, neighbors, and coworkers) concentric or supplemental?
4. Do people who report more hardships rely on more extensive networks?

## *Method*

### *Data and Sample*

The data for this study are drawn from *Coping with Hunger: Food Pantry Clients in the Central Missouri Food Bank Region* (2005). Food insecurity statistics in the state of Missouri show little variation from national statistics: an average of 11.3 % of Missouri residents were food insecure across the three years of 2002 through 2004 (Food Research and Action Center, 2006). Moreover, Missouri was one of 9 states listed by the Food Research and Action Center as having the most statistically significant increases in food insecurity between 1999 and 2004 (2006).

The Central Missouri Food Bank (CMFB) serves 31 counties in the central and northeast regions of the state and reportedly distributes the second-highest amount of food in the state, annually (see Appendix 1 for map of region served). And, in line with the aforementioned statistics acquired from America's Second Harvest (2005), the amount of food distributed by the CMFB increased by 50% between 2000 and 2004 (Foulkes, et al, 2005). Specifically, the CMFB reported serving an average of 75,000 persons every month in 2005 (Central Missouri Food Bank, 2006). Finally, it is important to note that the CMFB service area is primarily rural. These data, specifically, are comprised of approximately 24% of persons living in rural counties (less than 10,000 persons), and an additional 40% of respondents live in "micropolitan" counties (between 10,000 and 49,999 persons) (Foulkes, et al, 2005).

Data were compiled from systematic responses to a food pantry client survey, given across 47 pantry facilities and 11 mobile pantries. The project was initiated to assist the CMFB in its effort maintain and improve services provided to clients. The

survey instrument included sections designed to address issues such as food pantry use, food security, food acquisition sources, and general individual and household demographics. The completion rate for interviewing was 75.1%; the refusal rate was 22.1%. The data in this study are weighted to account for oversampling at various food pantry sites. The total sample for the project consisted of 1,314 surveys (Foulkes, et al, 2005). Cases containing missing values for the variables included in this analysis were eliminated yielding a total subsample of 1,261. Relying on a sample based entirely on food pantry clients enables this study to center its focus on those families and individuals who suffer from food vulnerability to better understand the role of social networks in their overall coping strategies.

### *Limitations*

It is important to note several limitations surrounding the data utilized in this study. First, it is highly possible that respondents' reliance on social networks is underestimated in this study. Again, if we consider the stigma associated with food vulnerability, there is the potential for people to report a decreased reliance on social networks than is actually the case. Finally, it is necessary to recognize that this study is unable to address longitudinal concerns. Specifically, I am unable to deal with probable differences across persons who are either new to attending a food pantry or those who have been attending for extended periods of time. Hence, while I agree these factors are of high importance, they will not be addressed here. I do believe, however, that this study provides an excellent starting point for the investigation of social networks in the lives of those who are distinctly food vulnerable. And, as such, it is just that: a starting point.

## *Variables*

*Dependent Variables.* The survey instrument included one primary question designed to address the utilization of informal social support. Specifically the respondents were asked:

(Question 16.1-4) Besides buying food, people may rely on friends and family and other folks in their communities to get food. So, I am going to read a short list of people from who you may have obtained food from over the last 12 months. Again, I 'd like you to tell me if you obtained food from them never at all [1], only one or two months [2], some months but not all [3], or every month [4].

The question was asked of the following networks: relatives, friends, coworkers, and neighbors. Hence, there are four dependent variables included in these models and all are continuous.

*Independent Variables.* The following independent variables were selected to account for variations in personal, family, and employment characteristics: gender, age, race/ethnicity, marital status, education, employment status, parental status, and length of time at current residence, number of hardships, and income level. For the multivariate analyses, they were operationalized as follows.

*Gender.* This variable was dichotomous. Males were coded 0; females were coded 1.

*Age.* This variable was continuous. All respondents were 18 years or older.

*Race/Ethnicity.* Four variables were created for this category: whites were coded as 1, 0 otherwise; blacks were coded as 1, 0 otherwise; those who identified as other were

coded 1, 0 otherwise; and respondents who identified as Hispanic were coded 1, 0 otherwise. Hispanics can be any race.

*Marital Status.* Three variables were created for this category: those who reported being married or cohabitating were coded as 1, 0 otherwise; those who were formerly married (i.e. separated, divorced, widowed) were coded as 1, 0 otherwise; and respondents who were never married were separated into a third variable where they were coded as 1, 0 otherwise.

*Education.* Three variables were created for this category based on respondent's highest level of completed education: those with less than a high school diploma were coded as 1, 0 otherwise; high school graduates were coded 1, 0 otherwise; some college or more were coded as 1, 0 otherwise.

*Employment status.* This variable was dichotomous. Those who reported employment were coded 1; 0 otherwise.

*Parental status.* This variable was continuous. Values range from 0 through 6 (indicating 6 or more children in household).

*Length of time at current residence.* This variable was dichotomous. Respondents who reported having moved within the past two years were coded 1; those who had not moved were coded 0.

*Number of hardships.* This variable was drawn from a survey question designed to identify economic hardship by asking respondents if they have ever had to choose between food and paying for medicine or medical care (Yes=1), paying for utilities (Yes=1), paying for rent or mortgage (Yes=1), and paying for gas (Yes=1). Hence, there were 0-4 points possible for this variable.

*Income level.* This variable was continuous: persons who reported an income level of 0-50% of the national poverty level were coded as 1; incomes between 51-100% of the national poverty level were coded 2; 101-130% was coded 3; and those with incomes 131% and above were coded 4.

### *Statistical Method*

*Descriptive Statistics.* Descriptive statistics were utilized to help summarize the data and to estimate relationships among the variables. Chi-square tests were completed to indicate significant mean differences.

*Multivariate Analysis.* A regression analysis was performed between dependent variables (reliance on social networks) and independent variables (age, gender, marital status, parental status, length of time attending food pantry) to better understand the circumstances under which a person suffering from food insecurity utilized social networks. Because the dependent variables, reliance on social networks, are continuous rather than dichotomous, I have used ordinary least squares regression. All statistical analyses were completed using SPSS software.



## *Findings*

### *Descriptive Analysis*

*Food assistance from relatives.* For my sample of persons who have values on all of the independent variables (N=1,261), the general percentage of persons who reported having received food from family is 52.9. Table 1 shows the percentages of persons who did not acquire food from family in the past 12 months, those who acquired food only one or two months, some months or every month. I will only highlight some of the findings from this descriptive table.

Looking at the influence of gender, we see that women are more likely than men to turn to family for food or help acquiring food. Moreover, women are more likely to have relied on family more than one or two months out of the past year. With regard to age, we also see that reliance on family is negatively correlated with age. In other words, as the respondents age increases, their reliance on relatives for food assistance decreases. Persons between the ages of 18 and 39 are slightly less than twice as likely to rely on family as persons over 60. Furthermore, younger persons are twice as likely to turn to family every month for help with food provisions.

With regard to race, I am able to report that blacks are more likely to turn to family, with a majority reporting a reliance on family more than 1 or 2 months during the past year.

Marital status also proved to be a significant factor, with respondents who reported never having married as more likely to rely on family. Additionally, those who identified having children in the household were also more likely to rely on family. It should be noted, however, that persons with 1-3 children in the home were more likely

<b>TABLE 1: PERCENTAGES OF PERSONS WHO HAVE RECEIVED FOOD FROM RELATIVES</b>						
<b>(N=1261)</b>						
	<b>Never</b>	<b>Only 1 or 2 months</b>	<b>Some Months</b>	<b>Every Month</b>	<b>Total<sup>a</sup></b>	<b>X<sup>2</sup> sig</b>
<b>Gender</b>						<b>0.026</b>
Male	54	17	19	10	100	
Female	45	17	25	12	100	
<b>Age</b>						<b>0.000</b>
18-39	36	20	27	17	100	
40-59	50	16	25	9	100	
60+	64	15	15	7	100	
<b>Race/Ethnicity</b>						<b>0.010</b>
White	48	18	23	11	100	
Black	38	12	32	18	100	
Other	54	15	18	14	100	
Hispanic	49	12	21	19	100	0.431
<b>Marital Status</b>						<b>0.002</b>
Married/Cohabiting	48	20	22	10	100	
Formerly married	50	13	24	12	100	
Never married	37	17	29	17	100	
<b>Education</b>						<b>0.070</b>
Less than high school	53	18	19	10	100	
High school graduate	44	18	26	12	100	
Some college or more	46	15	26	13	100	
<b>Employment Status</b>						0.066
Unemployed	49	18	22	11	100	
Employed	44	15	27	13	100	
<b>Children in Household</b>						<b>0.000</b>
None	55	16	20	10	100	
1-3 children	40	19	27	14	100	
4 or more children	49	17	24	11	100	
<b>Time at Current Residence</b>						0.205
No move within last 2 years	49	18	22	12	100	
Moved within last 2 years	45	17	27	12	100	
<b>Number of Hardships</b>						<b>0.000</b>
0 hardships	56	17	20	7	100	
1 hardships	49	16	24	11	100	
2 hardships	44	25	23	8	100	
3 hardships	44	17	26	13	100	
4 hardships	43	12	26	19	100	
<b>Income Level</b>						0.342
0-50% of poverty level	44	17	24	16	100	
51-100% of poverty level	48	18	23	11	100	
101-130% of poverty level	44	18	26	12	100	
131% and above	56	15	23	6	100	

Source: Coping With Hunger: Food Pantry Clients In The Central Missouri Food Bank Region, 2005

Values that are statistically significant are distinguished in bold type. \*p<.05, \*\*p<.01, \*\*\*p<.001

<sup>a</sup>Totals may not equal exactly 100% due to rounding

to rely on family at all levels than those individuals that reported having no children, as well as those who reported having 4 or more children in the home.

The number of hardships reported by respondents appears to be positively correlated with the likelihood that a respondent will turn to family at all. In other words, with the exception of having relied on relatives only 1 or 2 months, it is clear that as the number of hardships increase, so does the frequency of help sought from relatives.

*Food assistance from friends.* For my sample of persons who have values on all of the independent variables (N=1,261), the general percentage of persons who reported having received food from friends is 29. Table 2 shows the percentages of persons who did not acquire food from friends in the past 12 months, those who acquired food only one or two months, some months or every month. Again, I will only highlight some of the findings from this descriptive table.

In contrast, age was highly significant, indicating that persons under the age of 60 were more likely to turn to friends: 12 percent and 17 percent reported relying on friends 1 or 2 months and some months of the past year, respectively. Respondents between the ages of 18-39 were twice as likely to report utilizing friends for food support on a monthly basis. Respondents who reported having never been married, as well as those with incomes between 0-50 percent of the poverty level, were more likely to report a regular reliance on friends for food across all categories. Education also proved to be a significant factor; however, its influence tended to vary across categories. Those with less than a high school degree were least likely to report turning

TABLE 2: PERCENTAGES OF PERSONS WHO HAVE RECEIVED FOOD FROM FRIENDS (N=1261)						
	Never	Only 1 or 2 months	Some Months	Every Month	Total <sup>a</sup>	$\chi^2$ sig
Gender						0.207
Male	67	14	15	5	100	
Female	72	10	10	4	100	
Age						<b>0.000</b>
18-39	69	11	14	6	100	
40-59	67	12	17	3	100	
60+	83	7	6	3	100	
Race/Ethnicity						0.121
White	72	11	13	4	100	
Black	64	9	20	7	100	
Other	71	9	17	3	100	
Hispanic	70	12	12	7	100	0.796
Marital Status						<b>0.000</b>
Married/Cohabiting	75	11	11	3	100	
Formerly married	71	10	14	5	100	
Never married	57	12	24	7	100	
Education						<b>0.028</b>
Less than high school	77	8	11	4	100	
High school graduate	69	12	16	4	100	
Some college or more	68	13	13	6	100	
Employment Status						0.959
Unemployed	71	11	14	4	100	
Employed	71	11	14	4	100	
Children in Household						0.314
None	70	11	17	3	100	
1-3 children	72	11	12	5	100	
4 or more children	73	9	13	4	100	
Time at Current Residence						0.185
No move within last 2 years	73	10	13	3	100	
Moved within last 2 years	68	12	15	5	100	
Number of Hardships						<b>0.000</b>
0 hardships	78	10	10	2	100	
1 hardships	77	9	11	3	100	
2 hardships	74	8	15	2	100	
3 hardships	65	14	13	8	100	
4 hardships	61	13	20	7	100	
Income Level						<b>0.037</b>
0-50% of poverty level	65	12	16	7	100	
51-100% of poverty level	71	11	14	4	100	
101-130% of poverty level	76	10	11	4	100	
131% and above	84	5	9	1	100	

Source: *Coping With Hunger: Food Pantry Clients In The Central Missouri Food Bank Region, 2005*

Values that are statistically significant are distinguished in bold type. \*p<.05, \*\*p<.01, \*\*\*p<.001

<sup>a</sup>Totals may not equal exactly 100% due to rounding.

to friends. In contrast, respondents who reported having achieved at least some college attendance were more likely to report turning to friends only 1 or 2 months (13%) and every month (6%). Persons who acknowledged relying on friends more than 1 or 2 months were most likely to be high school graduates. Similar to the results presented for family support, the number of hardships was highly significant. Generally, as the number of economic hardships increased, so did the reliance on friends for food assistance.

*Food assistance from coworkers.* For my sample of persons who have values on all of the independent variables (N=1,261), the general percentage of persons who reported having received food from coworkers is 2.5. Table 3 shows the percentages of persons who did not acquire food from coworkers in the past 12 months, those who acquired food only one or two months, some months or every month. Only the significant findings will be highlighted here.

Only three characteristics proved to be significant in this analysis: race/ethnicity, marital status, and education. Generally, blacks, those who had never been married, and those who reported some college education were more likely to indicate a reliance on coworkers. However, the differences were slight and tended to vary across categories. Interestingly, employment status bore no effects on the likelihood of whether or not a respondent would rely on coworkers for food assistance<sup>1</sup>.

TABLE 3: PERCENTAGES OF PERSONS WHO HAVE RECEIVED FOOD FROM COWORKERS (N=1261)						
	Never	Only 1 or 2 months	Some Months	Every Month	Total <sup>a</sup>	$\chi^2$ sig
Gender						0.079
Male	96	1	3	1	100	
Female	98	1	1	0	100	
Age						0.097
18-39	97	1	2	0	100	
40-59	98	1	1	0	100	
60+	98	0	0	1	100	
Race/Ethnicity						<b>0.034</b>
White	98	1	1	1	100	
Black	94	2	4	0	100	
Other	99	1	0	0	100	
Hispanic	100	0	0	0	100	0.763
Marital Status						<b>0.045</b>
Married/Cohabiting	98	1	1	0	100	
Formerly married	98	1	1	1	100	
Never married	96	1	3	1	100	
Education						<b>0.025</b>
Less than high school	99	1	0	1	100	
High school graduate	98	1	1	0	100	
Some college or more	95	1	2	1	100	
Employment Status						0.137
Unemployed	98	1	1	1	100	
Employed	96	2	2	1	100	
Children in Household						0.446
None	98	0	1	1	100	
1-3 children	97	1	1	0	100	
4 or more children	97	2	1	0	100	
Time at Current Residence						0.873
No move within last 2 years	98	1	1	1	100	
Moved within last 2 years	97	1	1	0	100	
Number of Hardships						0.141
0 hardships	99	1	0	0	100	
1 hardships	99	0	1	0	100	
2 hardships	98	0	2	0	100	
3 hardships	96	2	1	1	100	
4 hardships	96	1	1	1	100	
Income Level						0.383
0-50% of poverty level	97	1	2	0	100	
51-100% of poverty level	98	1	1	1	100	
101-130% of poverty level	98	1	1	1	100	
131% and above	98	1	1	0	100	

Source: *Coping With Hunger: Food Pantry Clients In The Central Missouri Food Bank Region, 2005*

Values that are statistically significant are distinguished in bold type. \*p<.05, \*\*p<.01, \*\*\*p<.001

<sup>a</sup>Totals may not equal exactly 100% due to rounding.

*Food assistance from neighbors.* Table 4 shows the percentages of persons who not acquire food from neighbors in the past 12 months, those who acquired food only one or two months, some months or every month. The general percentage of persons who reported having relied on neighbors for assistance in acquiring food was 13. Importantly, none of the variables provided any significant influence on the likelihood that respondents would turn to neighbors for help.

### *Multivariate Analysis*

The results of the multivariate analysis are presented in Table 5. As was previously stated, because the dependent variables (reliance on social networks) are continuous I used ordinary least squares regression. I maintained separate models for each of the social networks: family, friends, coworkers, neighbors.

*Gender.* Similar to earlier research, the results of this study indicate that women receive more support from family than men do, but men are receive more support from coworkers. This coincides with the aforementioned studies that suggest that women's networks tend to be comprised primarily of family; in contrast to men's networks, which tend to be composed of mostly nonkin, particularly coworkers (Gilbert 1998; Moore 1990; Nelson 2005).

*Race/Ethnicity.* While the relationship between race and social networks continues to be debated, this study indicates that race is significant in allowing us to predict a reliance on family for food assistance. Specifically, my results suggest that blacks

TABLE 4: PERCENTAGES OF PERSONS WHO HAVE RECEIVED FOOD FROM NEIGHBORS (N=1261)						
	Never	Only 1 or 2 months	Some Months	Every Month	Total <sup>a</sup>	$\chi^2$ sig
Gender						0.665
Male	85	6	6	3	100	
Female	88	5	6	2	100	
Age						0.531
18-39	88	4	6	2	100	
40-59	86	6	6	2	100	
60+	88	7	4	2	100	
Race/Ethnicity						0.342
White	87	5	5	2	100	
Black	87	4	7	2	100	
Other	83	7	10	0	100	
Hispanic	93	2	5	0	100	0.594
Marital Status						0.846
Married/Cohabiting	87	6	6	2	100	
Formerly married	86	6	6	2	100	
Never married	89	3	6	2	100	
Education						0.862
Less than high school	87	5	5	2	100	
High school graduate	87	6	5	2	100	
Some college or more	88	4	7	1	100	
Employment Status						0.977
Unemployed	87	5	6	2	100	
Employed	87	6	5	2	100	
Children in Household						0.963
None	87	6	6	2	100	
1-3 children	87	5	6	2	100	
4 or more children	87	6	6	1	100	
Time at Current Residence						0.180
No move within last 2 years	86	5	6	3	100	
Moved within last 2 years	89	5	5	1	100	
Number of Hardships						0.071
0 hardships	89	5	6	1	100	
1 hardships	91	4	2	3	100	
2 hardships	89	5	6	1	100	
3 hardships	83	9	7	2	100	
4 hardships	85	5	8	3	100	
Income Level						0.800
0-50% of poverty level	90	5	4	2	100	
51-100% of poverty level	86	6	7	2	100	
101-130% of poverty level	84	7	6	3	100	
131% and above	91	3	5	1	100	

Source: *Coping With Hunger: Food Pantry Clients In The Central Missouri Food Bank Region, 2005*

Values that are statistically significant are distinguished in bold type. \*p<.05, \*\*p<.01, \*\*\*p<.001

<sup>a</sup>Totals may not equal exactly 100% due to rounding.



receive more support than whites from family. Hence, this analysis appears to support the earlier research which purports that blacks tend to rely on family more than whites.

*Marital status.* One's marital status appears to only help us predict whether a person will turn to family or friends, but not coworkers or neighbors. Specifically, those who were formerly married relied on family more than those who are married. These results support the findings of Neustrom, et al (2001) and Taylor, et al (1988) who also found that married people were less likely to receive assistance from family. Moreover, respondents who identified themselves as never having married turned to friends for food assistance more than married persons.

*Education.* Education only served to assist us in predicting who will turn to friends and coworkers. Specifically, my results indicate that persons without a high school diploma turn to friends less than high school graduates. Moreover, those respondents who had at least some college experience tended to turn to coworkers for assistance.

*Employment status.* Interestingly, employment status had no effect on our ability to predict who persons turn to for food assistance, even for coworkers. I believe this may speak to the increasing number of working poor who are frequenting food pantries and further supports recent studies that have found that a significant number of the persons who seek emergency food assistance are employed (Berner & O'Brien 2004; Biggerstaff, et al. 2002; Knab 2005). This raises additional concerns regarding the inability of employment to serve as a buffer against food insecurity.

<b>TABLE 5: OLS REGRESSION OF SOCIAL NETWORKS USED BY SELECTED CHARACTERISTICS</b>				
	<b>Food from Family</b>	<b>Food from Friends</b>	<b>Food from Coworkers</b>	<b>Food from Neighbors</b>
Gender	0.164*	-0.085	-0.044*	-0.053
Age	-0.018***	-0.005**	0.000	-0.002
Race/Ethnicity				
White	----	----	----	----
Black	0.247*	0.099	0.031	0.034
Other	-0.114	-0.038	-0.039	0.115
Hispanic	0.133	0.082	-0.020	-0.199
Marital Status				
Married/Cohabiting	----	----	----	----
Formerly married	0.191**	0.111	-0.009	0.039
Never married	0.163	0.268***	0.029	-0.190
Education				
Less than high school	-0.123	-0.116*	-0.004	-0.002
High school graduate	----	----	----	----
Some college or more	-0.047	0.003	0.055*	-0.019
Employment Status	-0.042	-0.057	0.025	-0.024
Children in Household	-0.020	-0.042*	-0.005	-0.003
Time at Current Residence	-0.102	0.005	-0.005	-0.102**
Number of Hardships	0.077***	0.089***	0.017**	0.028*
Income Level	-0.017	-0.101***	-0.010	0.021
Constant	2.567***	1.869***	1.05***	1.312***
Number of Cases	1261	1261	1261	1261
R2 (adjusted)	0.077	0.072	0.014	0.003

Source: *Coping With Hunger: Food Pantry Clients In The Central Missouri Food Bank Region, 2005*

\*p<.05, \*\*p<.01, \*\*\*p<.001

*Children in the household.* While the number of children in the respondents' households, was not statistically significant, this finding, nonetheless, sheds an interesting light on the role of parenthood in the utilization of social networks. In particular, this study demonstrates that as the number of children in a household increases, their tendency to seek help from friends decreases. This finding is rather

unexpected. It was hypothesized that parents who are responsible for acquiring food for persons other than themselves would be more likely to seek food assistance from different sources. However, this finding is important in that it suggests that parental status is not the significant determinant of types of support utilized. Noticeably, other factors, such as the number of hardships, tend to weigh more heavily.

*Time at current residence.* The results indicate that persons who have moved within the past two years rely less on neighbors for help in acquiring food. This is unsurprising, as a person who has been a neighborhood resident for two years or less is probably less likely to know neighbors as well as someone who has been a member of their community for a longer period of time. I believe this also speaks to the more recent research which proffers a decrease in voluntary relationships, such as those with neighbors and other nonkin (McPherson, et al. 2006).

*Number of hardships.* The number of hardships proved the most influential variable in increasing our ability to predict the networks of food vulnerable persons. Across all networks, as the number of hardships increases, so does the utilization of networks. In other words, those who report more hardships of having to choose between food and gas, or medical care, or housing costs, tend to turn to family, friends, coworkers and neighbors for help with food acquisition. This may, in fact, speak to my original hypothesis that those persons who are facing more extreme levels of economic disadvantage are more likely to turn to more diverse networks for assistance. Whether or not these levels are concentric, however, will be addressed below.

*Income level.* Surprisingly, especially in spite of the aforementioned results surrounding economic hardship, income level was only a significant predictor across one level of social networks. According the results of the OLS regression analysis, as one's income level increases, reliance on friends decreases.

*Networks as concentric or nonconcentric*

Thus far I have examined who food-vulnerable persons turn to when they need food or money to purchase food, as well as what characteristics predict the general utilization of those networks. Now, I will consider the following question: Are social networks (i.e. family, friends, neighbors, and coworkers) concentric or supplemental?

Table 6 presents the general frequencies of networks utilized. Generally, the results indicate that 62 percent (n=783) of respondents reported turning to someone for food assistance. Specifically, 35 percent of persons reported turning to only one source, 19 percent acknowledged relying on two sources, seven percent relied on three sources, and only one percent claimed to have turned to all four sources. Importantly, these findings suggest that a majority of respondents are relying on one or more informal networks for help in acquiring food. As such, the role of social networks in furthering our understanding of how people cope with food vulnerability is of high importance. Nonetheless, this information alone does not fully illustrate the order in which these networks are relied upon.

<b>TABLE 6: FREQUENCY OF SOURCES IN NETWORK</b>		
	<b>N</b>	<b>Percent</b>
Utilized 0 Sources in Network	478	38
Utilized 1 Source in Network	445	35
Utilized 2 Sources in Network	240	19
Utilized 3 Sources in Network	88	7
Utilized 4 Sources in Network	10	1
<b>Total</b>	<b>1261</b>	<b>100</b>

Source: *Coping With Hunger: Food Pantry Clients In The Central Missouri Food Bank Region, 2005*

The next step, then, is to narrow our focus. Table 7 presents the percentages of persons who did report turning to someone. Hence, those respondents who denied any reliance on informal support networks have been removed. Moreover, of those who indicated relying on anyone, Table 7 indicates the frequency of that reliance on specific networks. In essence, the results in this table illustrate that of the 445 people who relied on only one source, that source tended to be family (82%). Additionally, we see that of those who relied on two and three sources, family still tends to be the primary source, followed by friends, neighbors, and then coworkers. For example, of the 88 people who noted three network sources, 97% used family, 88% used neighbors, and all of them (100%) used friends. Consequently, this analysis hints at the conclusion that networks are, in fact, concentric. The percentages alone allude to an interpretation such that family, friends, neighbors and coworkers represent a sort of broadening of networks. In other words, respondents tend to view family as their primary source of help, subsequently proceeding outward.

	<b>1 Source</b>		<b>2 Sources</b>		<b>3 Sources</b>		<b>4 Sources</b>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Family	365	82	209	87	85	97	10	100
Friends	62	14	204	85	88	100	10	100
Coworkers	1	0.2	7	3	14	16	10	100
Neighbors	17	4	60	25	77	88	10	100

Source: *Coping With Hunger: Food Pantry Clients in the Central Missouri Food Bank Region, 2005*

Note: Categories 2-4 are not mutually exclusive.

However, I believe that whether or not these networks are concentric can be further illuminated and clarified. In an attempt to do this, I considered all possible variations of networks and completed an analysis of frequencies. The results are presented in Table 8. As with the previous analysis, family continues to be the first and foremost source utilized. This examination, however, indicates that the second most frequently used combination is family and friends, followed by family, friends, and neighbors. Specifically, 48.3 percent of respondents reported relying on family alone, 23.2 percent reported relying on family and friends, and 9.8 percent reported relying on family, friends and neighbors. Moreover, as the ordered presentation suggests, these three categories are the three most common combinations of networks utilized. Hence, this analysis clearly demonstrates that social networks are concentric. Particularly, it appears that, aside from family as a lone source, people turn to friends in combination with family. Likewise, neighbors tend to be relied on primarily in conjunction with family and friends. This speaks to the leveled order of informal social networks. Now whether this leveled utilization stems from need or a fear of over-reliance is unclear. In other words, perhaps people are turning to friends and neighbors, respectively, when family is unable to continue to assist them in acquiring food. Or, perhaps they are

trying to diversify their networks in attempts to prevent overextending their primary source.

	<b>n</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Family	364	48.3	48.3
Family, Friends	175	23.2	71.6
Family, Friends, Neighbors	74	9.8	81.4
Friends	63	8.4	89.8
Friends, Neighbors	28	3.7	93.5
Neighbors	17	2.3	95.8
Family, Friends, Coworkers	11	1.5	97.2
Family, Friends, Coworkers, Neighbors	10	1.3	98.5
Family, Coworkers	3	0.4	98.9
Friends, Coworkers, Neighbors	3	0.4	99.3
Friends, Coworkers	2	0.3	99.6
Coworkers, Neighbors	2	0.3	99.9
Coworkers	1	0.1	100.0

Source: *Coping With Hunger: Food Pantry Clients in the Central Missouri Food Bank Region, 2005*

In order to better understand the potential reasons why these levels are concentric I now turn to the fourth question of this analysis: do people who report more hardships rely on more extensive networks? Importantly, this will assist us in delineating whether expanded networks are related to increased need. As was previously stated, economic hardship was defined as a forced choice between paying for food and medical care, utilities, rent or mortgage, and/or gas. Additionally, I believe that the experience of hardship can be further illustrated through the frequency of requested support. Explicitly, as earlier analyses and descriptions acknowledged, respondents were asked how often they turned to networks (i.e. never, 1 or 2 months, some months, every month). Hence, there are two potential approaches that can be

applied to further our understanding of why networks may be extended. Both aspects will be addressed below.

*Frequency of support as an indication of hardship.* In an attempt to analyze frequency of support as a measure of need, I have centered this examination on only those who sought some sort of help every month. Furthermore, this analysis looks at who sought help every month from family, friends, coworkers, and neighbors against the number of sources utilized. The results are presented in Table 9.

	<b>1 Source</b>		<b>2 Sources</b>		<b>3 Sources</b>		<b>4 Sources</b>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Family	67	18	52	25	25	29	5	50
Friends	8	13	29	14	13	15	3	30
Coworkers	1	100	2	29	1	7	2	20
Neighbors	1	6	7	12	13	17	3	30

Source: *Coping With Hunger: Food Pantry Clients in the Central Missouri Food Bank Region*, 2005

The findings in Table 9 illustrate that as the number of sources utilized increases, so does the general frequency that the respondent will seek out help on a monthly basis. For example, of persons who reported only relying solely on family, 18 percent reported asking for help with food acquisition every month. In contrast, of those respondents that reported utilizing all 4 sources, 50 percent admitted asking for help from family every month. This increase is evident across family, friends and neighbors. Hence, these results indicate persons who experience food vulnerability on a regular (i.e. monthly) basis have a more extensive range of networks. This finding suggests that a broader range of networks may very well be indicative of a greater need. Conceivably,



experiencing food vulnerability every month has compelled these families and individuals to seek out more sources of support.

*Reported Hardships.* Again, examining the relationship between the number of reported hardships in relation to the number of sources utilized can also add to our understanding of the association between need and social support. In order to do this, I have compared the mean number of reported hardships with the number of reported sources. The results of this analysis are presented in Table 10.

<b>TABLE 10: MEAN NUMBER OF HARDSHIPS ACROSS NUMBER OF SOURCES (N=1261)</b>		
	<b>Mean</b>	<b>N</b>
0 Sources	1.78	478
1 Source	1.99	445
2 Sources	2.36	240
3 Sources	2.40	88
4 Sources	2.50	10

Source: *Coping With Hunger: Food Pantry Clients in the Central Missouri Food Bank Region, 2005*

According to this analysis, we can see that as the number of reported sources increases, so does the mean number of experienced hardships. For example, persons who reported relying on no one or those who turned only to one source reported 1.78 and 1.99 hardships, respectively. In contrast, persons who reported turning to four sources reported an average of 2.50 hardships. This is an important finding in that it further supports the conclusion that network expansion is most likely compelled by need.

## *Discussion*

My study indicates that food pantry clients in the mid-Missouri region do utilize informal support networks in attempts to cope with food insecurity. Family and relatives appear to be the primary source of support, followed by friends, neighbors, and coworkers. While earlier research suggested that neighbors comprised a significant source of informal support, this study coincides with more recent literature that speaks to the increasing “social isolation” in America (Stack, 1974; McPherson, et al 2006). In line with McPherson, et al (2006), this analysis confirms that network characteristics may have changed over the past three decades. As multiple studies indicated, maintaining a core group of networks requires a certain level of trust (Ahluwalia, et al 1998; Edin & Lein 1997; McPherson, et al 2006). The mothers in Edin and Lein’s (1997) study, as well as those acknowledged in Ahluwalia, et al (1998), who asserted a lack of trust in non-kin, for fear that they would tell children’s services about their precarious situation resulting in their children being taken away, are prime examples. While the article by McPherson, et al (2006) focused primarily on discussion networks, as opposed to networks as sources of material assistance, their article is an important starting point for analysis of the social networks of food-insecure families and individuals. If verbal communication alone is becoming more limited over time, then it can be further surmised that the actual receipt of food and money for food would become more limited as well. This should be especially true when we consider the stigma of hunger in the United States. Overall, this study illustrates that informal social networks are proving to be a significant source of support for persons facing food insecurity. And, if we assume the well-documented homogeneity of networks, then the

implications would support the assertion of Sharon Hays: Many poor "...will (reluctantly) knock on the doors of the working-poor and working-class people who are their friends and relatives. It is these people who will share their homes, their food, and their incomes... (2003, p. 229)."

This analysis demonstrated that numerous characteristics will predict the utilization of food networks by vulnerable individuals and families. Generally, women and Blacks are more likely to turn to family, as are those with children. Younger people are more likely to rely on friends and relatives as well, and they are more likely to seek food assistance on a monthly basis. Never-married respondents are significantly more likely to turn to family, friends, and coworkers for help, while formerly-married persons are more likely to turn to family. These latter points may stem from the disproportionate number of single mothers who face food insecurity and poverty, generally. According to Nord, et al (2005), the incidence of food insecurity is considerably higher for households headed by single women with children. Of course, this story is not new; countless books and articles have repeatedly documented this gender inequality. Unfortunately it is still very real.

Education appears to serve as a sort of conduit for expanding networks. Those with at least some college experience are more likely to turn to friends and coworkers. In contrast, those without a high school diploma are the least likely to turn to friends. Perhaps this stems from a mere increase in exposure and opportunity to meet different people, as well as the potential to meet people of higher socioeconomic status. Or, perhaps the stigma of being a high-school dropout could decrease one's willingness to seek out help; whereas having at least attempted college indicates some level of self-

sacrifice and personal responsibility. Again, the social debate surrounding the differentiation between “deserving” and “undeserving” poor is extensive and will not be fully developed here.

The number of reported hardships was highly significant in allowing us to predict the use of family, friends, coworkers and neighbors. This finding is very important in that it further demonstrates the importance of need in determining whether one turns to networks for assistance. As Edin and Lein (1997) found, their respondents’ first strategy was to survive on their own wages. When this proved impossible, the mothers turned to personal networks for assistance. This study corroborates that finding. The significance of the number of hardships in our ability to predict whether food-insecure individuals will seek help validates the assertion that people turn to networks out of need. Their precariousness is real, and most likely, haunting. Whether working or not, their inability to “make it” is mirrored in their general experience of hardship. When faced with choosing between food and medicine, or food and utilities, they seek out sources of help. And, clearly, informal social networks, such as family and friends, play important roles within their system of survival strategies.

Moreover, as the final analysis illustrated, the number of reported hardships also appears to influence the degree to which individuals incorporate various levels of networks. As the number of experienced hardships increases, so does the number of sources within their network. In other words, those who report an average of two or more hardships are more likely to report turning to three or four sources for help with food. This plainly indicates that increased need forces people to seek out different forms of assistance.

The most prominent question this study sought to answer was whether social networks were concentric. My findings reveal that they are concentric. Persons facing food insecurity tend to turn primarily to family, then friends, followed by neighbors and coworkers. There are two primary factors that may influence this finding: trust and a sense of obligation. As was previously stated, the former symbolizes a sense of security in one's ability to share their vulnerabilities. It would seem logical to most, then, that food-insecure individuals would be more likely to share their predicament with their families, having presumably less fear that they will be turned in for neglect. In contrast, that fear cannot be entirely eliminated when considering more extended networks, such as neighbors. Additionally, admitting to "stressing over money" could be presumed to be somewhat normal; whereas the actuality of not having enough food is frequently alleged as peculiar and a consequence of personal defect. Hence, it is my argument that higher levels of trust may exist between relatives than nonkin. As the respondents in the study by Ahluwalia, et al (1998) suggested, family members were the most trustworthy people in their general network.

The cliché is common: "blood is thicker than water." This saying denotes an obligation that exists between relatives, particularly immediate family. The message is that family is expected to help when times are bad. In contrast, there is no universal expectation that neighbors should provide assistance when food runs out, especially if it runs out on a regular basis. As several of the aforementioned studies pointed out, family support tends to be "more free", so to speak, and unconditional (Edin & Lein 1997; Gilbert 1998; Nelson & Smith 1999; Schweizer, et al 1998; Wellman and Wortley 1990). Moreover, as Ahluwalia et al (1998) state, turning to nonkin stemmed

from either having exhausted their family's resources, or a fear of that impending exhaustion. Whatever the grounds, the implication is the same: family appears to serve as a primary source, followed secondly by friends, then neighbors and coworkers. The social networks of food-insecure families and individuals are concentric.

### *Implications for Policy and Practice*

The consequences of my findings are important and widespread. With the ten year anniversary of the enactment of the Personal Responsibility and Work Opportunity Reconciliation Act upon us, direct effects of the legislation on the lives of the persons who were in its direct path are still becoming visible. As more and more families are eliminated from the welfare roles and government food stamp assistance is terminated, the numbers of persons facing food insecurity continue to rise (Fremstad 2003; Hays 2003). While this study indicates that many of the poor do have other resources, the acknowledgement of homogenous networks validates the concern that the persons most likely to bear the weight of decreasing governmental aid are other poor. Moreover, as Sharon Hays (2003) speculates, additional impacts could be felt in other areas such as increases in prison populations, more funding needed for mental health facilities, children's services and the foster care system, as well as domestic violence shelters. Furthermore, as the earlier discussion suggested, food insecurity has drastic effects on children as well. Decreased academic attention and success, higher incidences of physical illness and hospitalization, and emotional instability are only a few (Ashiabi 2005; Cook, et al 2004).

I believe that additional research that seeks to understand the detailed nature of the family networks of the food-insecure would be helpful. Assuming homogeneity of networks, I believe it would be beneficial to clarify how food-insecure families share and navigate their own perilous situations while attempting to provide the obligated help to relatives. I suspect this would further support the overwhelming reliance of poor on the poor and also shed additional light on the “social work” required to maintain positive healthy relationships amidst concerns of physical survival.

### *Notes*

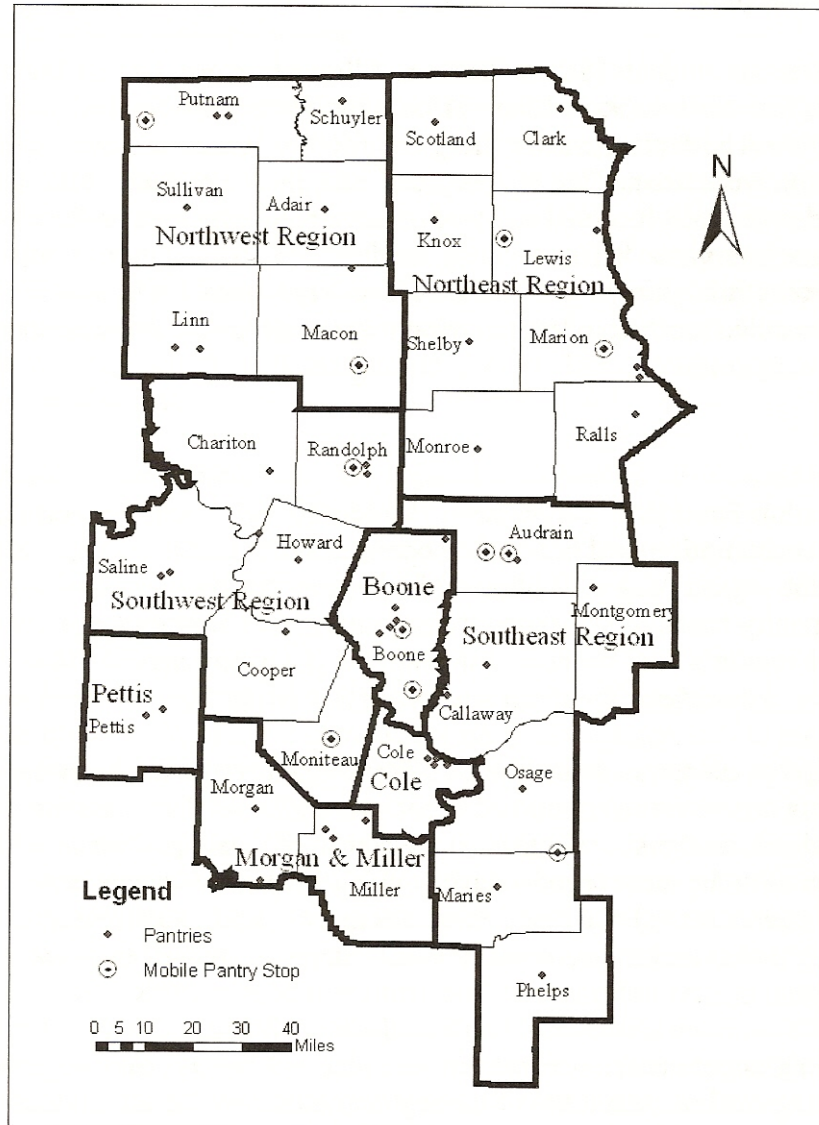
1. Logistic Regression was originally completed on dependent variable (0=Never received support; 1=Ever received support). However, it was discovered that much of the richness of the respondents' stories was reduced when the variation across the monthly amount of receipt was eliminated. Hence, ordinary least squares regression was used to improve the telling of the stories of the respondents' experiences.
2. Only half of those who indicated reliance coworkers were employed at the time of the survey. The other half were not employed at the time of the survey, but they did report assistance from a coworker over the course of the previous twelve months.



*Appendix 1: Central Missouri Food Bank Service Region*

The Central Missouri Food Bank serves nearly 70 locations distributing food for off-site preparation and consumption, and in addition, operates a mobile pantry that makes monthly visits to sites in the region.

**Study Area**



## *References*

- Ahluwalia, Indu B., Janice M. Dodds, and Magda Baligh. 1998. "Social Support and Coping Behaviors of Low-Income Families Experiencing Food Insufficiency in North Carolina." *Health Education & Behavior*. 25(5), pp. 599-612
- America's Second Harvest. 2005 *Annual Report*. [www.secondharvest.org](http://www.secondharvest.org)
- Anderson, Elijah. 1990. *Streetwise: Race, Class, and Change in an Urban Community*. The University of Chicago Press: Chicago, IL
- Ashiabi, Godwin. 2005. "Household Food Insecurity and Children's School Engagement." *Journal of Children & Poverty*. 11(1).
- Bartfield, Judi. 2003. "Single Mothers, Emergency Food Assistance, and Food Stamps in the Welfare Reform Era." *The Journal of Consumer Affairs*. 37(2), pp. 283-304.
- Berner, Maureen & Kelley O'Brien. December, 2004. "The Shifting Pattern of Food Security Support: Food Stamp and Food Bank Usage in North Carolina." *Nonprofit and Voluntary Sector Quarterly*. 33(4), pp. 655-672.
- Bhattarai, Ghandi Raj, Patricia A. Duffy, and Jennie Raymond. 2005 "Use of Food Pantries and Food Stamps in Low-Income Households in the United States." *The Journal of Consumer Affairs*. 39(2), pp. 276-298.
- Biggerstaff, Marilyn A., Patricia McGrath Morris, and Ann Nichols-Casebolt. 2002. "Living on the Edge: Examination of People Attending Food Pantries and Soup Kitchens." *Social Work*. 47(3), pp. 267-277.
- Cook, Christine, Sue R. Crull, Cynthia N. Fletcher, Thessalenuere Hinnant-Bernard, and Jennifer Peterson. 2002. "Meeting Family Housing Needs: Experiences of Rural Women in the Midst of Welfare Reform." *Journal of Family and Economic Issues*. 23(3), pp 285-316.
- Edin, Kathryn and Laura Lein. 1997. *Making Ends Meet: How Single Mother Survive Welfare and Low-Wage Work*. Russell Sage Foundation: New York, NY.
- Food Research and Action Center. *State of the States, 2006*. [www.frac.org](http://www.frac.org).
- Foulkes, Matt, Joan Hermsen, Nikki Raedeke, Sandy Rikoon, and Erin Whiting. December, 2005. *Coping with Hunger: Food Pantry Clients in the Central Missouri Food Bank Region*.

- Fremstad, Shawn. September 5, 2003. *Falling TANF Caseloads amidst Rising Poverty Should be a Cause for Concern*. Center on Budget and Policy Priorities.
- Frongillo, Edward A., Pascale Valois, Wendy S. Wolfe. 2003. "Using a Concurrent Events Approach to Understand Social Support and Food Insecurity Among Elders." *Family Economics and Nutrition Review*. 15(1), pp. 25-32.
- Gans, Herbert J. 1962. *The Urban Villagers: Group and Class in the Life of Italian-Americans*. The Free Press: New York, NY.
- Gilbert, Melissa R. 1998. "Race, Space and Power: The Survival Strategies of Working Poor Women." *Annals of the Association of American Geographers*. 88(4), pp. 595-621.
- Gringeri, Christina A. 2001. "The Poverty of Hard Work: Multiple Jobs and Low Wages in Family Economies in Rural Utah Households." *Journal of Sociology and Welfare*. XXVIII, Number 4, pp. 3-22.
- Granovetter, Mark S. 1973. "The Strength of Weak Ties." *American Journal of Sociology*. 78, pp. 1360-1380.
- Hall, Bryan. October, 2005. *Center on Hunger and Poverty Bulletin*. Center on Hunger and Poverty. [www.centeronhunger.org](http://www.centeronhunger.org).
- Hays, Sharon. 2003 *Flat Broke with Children: Women in the Age of Welfare Reform*. Oxford University Press: New York, NY.
- Hertz, Rosanna and Faith I. Ferguson. 1998. "Only One Pair of Hands: Ways that Single Mothers Stretch Work and Family Resources." *Community, Work & Family*. 1(1), pp. 13-37.
- Hoisington, Anne, Jill Armstrong Shultz, and Sue Butkus. November/December 2002. "Coping Strategies and Nutrition Education Needs Among Food Pantry Users." *Journal of Nutrition Education and Behavior*. 34(6), pp 326-333.
- Jayakody, Rukmalie, Linda M. Chatters, Robert Joseph Taylor. 1993. "Family Support to Single and Married African American Mothers: The Provision of Financial, Emotional and Child Care Assistance." *Journal of Marriage and the Family*. 55(2), pp. 261-276.
- Jensen, Helen H. 2002. "Food Insecurity and the Food Stamp Program." *American Journal of Agricultural Economics*. 84(5), pp. 1215-1228.

- Kempson, Kathryn M., Debra Palmer Keenan, Puneeta Sonya Sadani, Sylvia Ridlen, Nancy Scotto Rosato. 2002. "Food Management Practices Used by People with Limited Resources to Maintain Food Sufficiency as Reported by Nutrition Educators." *Journal of The American Dietetic Association*. 102(12), pp. 1795-1799.
- Knab, Jean. 2005. "Marriage, Poverty, and Material Hardship." Working paper: October 14, 2005. Princeton University, Princeton, NJ.
- Maxwell, Daniel G. 1996. "Measuring Food Insecurity: The Frequency and Severity of 'Coping Strategies.'" *Food Policy*. 21(3), pp. 291-303.
- McIntyree, Lynn, N. Theresa Glanville, Kim D. Raine, Jutta B. Dayle, Bonnie Anderson, Noreen Battaglia. March 18, 2003. "Do low-income lone mothers compromise their nutrition to feed their children?" *Canadian Medical Association Journal*. 168(6), pp. 686-691.
- McPherson, Miller, Lynn Smith-Lovin, James M. Cook. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology*. 27, pp. 415-444.
- McPherson, Miller, Lynn Smith-Lovin, Mathew E. Brashears. 2006. "Social Isolation in America: Changes in Core Discussion Networks over Two Decades." *American Sociological Review*. 71, pp. 353-375.
- Moore, Gwen. 1990. "Structural Determinants of Men's and Women's Personal Networks." *American Sociological Review*. 55(5), pp 726-735.
- Mosley, Jane and Laura Tiehan. June, 2004. "The Food Safety Net after Welfare Reform: Use of Private and Public Food Assistance in the Kansas City Metropolitan Area." *Social Service Review*.
- Nelson, Margaret K. and Joan Smith. 1999. *Working Hard and Making Do: Surviving in Small Town America*. University of California Press: Berkeley and Los Angeles, CA.
- Nelson, Margaret K. 2005. *The Social Economy of Single Motherhood: Raising Children in Rural America*. Routledge: New York, NY.
- Neustrom, Alison, Forrest A. Deseran, Don Moore. 2001. "Sources and Types of Formal and Informal Assistance: Patterns Among Louisiana's Welfare Populations." Paper presented at the annual workshop of the National Association for Welfare Research and Statistics. Baltimore, MD
- Nord, Mark. Summer-Fall, 2002. "Food Security Rates are High for Elderly Households." *Food Review*. Economic Research Service, United States Department of Agriculture 25(2), pp. 19-24.

- Nord, Mark, Margaret Andrews, Steven Carlson. 2004. *Household Food Security in the United States, 2003*. Food Assistance and Nutrition Research Report, Number 42. Economic Research Service, United States Department of Agriculture.
- Nord, Mark, Margaret Andrews, Steven Carlson. 2005. "ERS Report Summary." *Household Food Security in the United States, 2004*. Economic Research Service, United States Department of Agriculture.
- Nord, Mark, Margaret Andrews, Steven Carlson. 2006. "ERS Report Summary." *Household Food Security in the United States, 2005*. Economic Research Service, United States Department of Agriculture.
- Schwartz-Nobel, Loretta. 2002. *Growing Up Empty: The Hunger Epidemic in America*. HarperCollins Publishers: New York, NY.
- Schweizer, Thomas, Michael Schnegg, Susanne Berzborn. 1998. "Personal Networks and Social Support in a Multiethnic Community of Southern California." *Social Networks*. 20, pp. 1-21.
- Stack, Carol B. 1974. *All Our Kin: Strategies for Survival in a Black Community*. Harper and Row: New York, NY.
- Taylor, Robert Joseph, Linda M. Chatters, Vickie M. Mays. 1988. "Parents, Children, Siblings, In-Laws, and Non-Kin as Sources of Emergency Assistance to Black Americans." *Family Relations*. 37(3), pp. 298-304.
- Tigges, Leann M, Irene Browne, Gary P. Green. 1998. "Social Isolation of the Urban Poor: Race, Class, and Neighborhood Effects on Social Resources." *The Sociological Quarterly*. 39(1), pp. 53-77.
- Unger, Donald G. and Douglas R. Powell. 1980. "Supporting Families under Stress: The Role of Social Networks." *Family Relations*. 29(4), pp. 566-574.
- Wellman, Barry and Scot Wortley. 1990. "Different Strokes for Different Folks: Community Ties and Social Support." *American Journal of Sociology*. 96(3), pp. 558-588.
- Wilson, William Julius. 1996. *When Work Disappears: The World of the New Urban Poor*. Vintage Books: New York, NY.
- Whiting, Erin Feinauer. August, 2006. *Understanding Reservation Hunger: Food Acquisition and Food Security among the Northern Cheyenne*. Doctoral Dissertation, University of Missouri-Columbia.